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PART I.

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CONTENTS.



1. PALACES OF ANCIENT GAZA.
FLINDERS PETRIE.
2. ANCIENT DEFENCES OF GAZA.
LIEUT.-COL. N. P. CLARKE.
3. STATUETTE OF PEPEY, SON OF SENTMUT.
R. ENGELBACH.
4. A TOWN IN OLD NUBIA.
J. H. DUNBAR.
5. REVIEWS :
OLMSTEAD'S PALESTINE.
OSIRIS.
MARC ANTONY.
6. JOURNALS :
PALESTINE EXPLORATION FUND.
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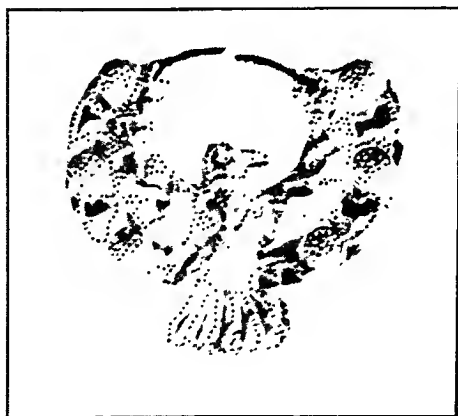
ANCIENT EGYPT

1932.

JUNE.

PART II.

CONTENTS.



- ✓ 1. MOHENJO-DARO. FLINDERS PETRIE.
2. ANCIENT GAZA. FLINDERS PETRIE.
3. BLUE AND GREEN. G. D. HORNBLOWER.
4. RECENT ANALYSES. FLINDERS PETRIE
5. REVIEWS :
TOPOGRAPHICAL BIBLIOGRAPHY.
CHESTER BEATTY PAPYRI I.
DIGGING UP BIBLICAL HISTORY.
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ANCIENT EGYPT

1932.

SEPTEMBER.

PART III.

CONTENTS.

1. PAINTINGS AT GHASSUL.
REV. J. G. DUNCAN.
2. THE HIDDEN GOD.
DR. T. H. GASTER.
3. A PORTRAIT HEAD.
THE FINGER OF GOD.
FLINDERS PETRIE.
4. AN EARLY SED-FESTIVAL.
DR. M. A. MURRAY.
5. NOME COINS OF EGYPT.
J. G. MILNE.
6. REVIEWS :
EGYPTIAN UNIVERSITY WORK.
LOUVRE CATALOGUE.
JEMDET NASR.
WIENER'S ESSAYS.
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ANCIENT EGYPT

1932.

DECEMBER.

PART IV.

CONTENTS.



1. ANCIENT GAZA, 1932-33.
FLINDERS PETRIE.
2. POINTS FROM RAS SHAMRA.
THEODOR GASTER.
3. EXCAVATIONS AT MA'ADI.
PROF. OSWALD MENGHIN.
4. THE PENDULUM IN EGYPT.
FLINDERS PETRIE.
5. REVIEWS :
EGYPT AND THE PENTATEUCH.
INFLUENCE OF ISLAM.
TEBTUNIS PAPYRI.
RESTORATION OF ANTIQUES.
PERSIAN EXPLORATION.
6. JOURNALS :
ZEITSCHRIFT, LXV, LXVI.
BULL. INST. FRANC. ARCH. ORIENT.
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THE PALACES OF ANCIENT GAZA.
TELL EL AJJŪL.

AFTER the discovery last year of the Canaanite and Hyksos city of Tell el Ajjul, it was plainly desirable, next, to find the more important buildings of the city. The presumption that the north or west sides of sites were the more favoured, for the sake of coolness, led to finding at Gerar the fort and residency of Psamtek,



FIG. 1.—DECORATED BOWL, ANATOLIAN ?

FIG. 2.—COARSE CYPRIOTE IMITATION.

at Beth-pelet the residencies of Vespasian, of Shishak, and of the XVIII-XIXth dynasties. At Ancient Gaza, therefore, I settled to work on the north end of the west side, facing the sea.

We soon found walls 40 inches thick, double the width of those for private houses. There were but a few inches of the base left standing after the heavy denudation which had taken place ; we searched below for earlier walls, but found only heaped-up native sand and gypsum. Gradually it appeared that

each of the successive builders here had piled up earth outside the original bank to raise it, and built on the new ground further out. At first this part of the hill was but a dozen feet above the land outside, but that was raised by piling and by ruins until it is now 20 feet higher.

The condition of the site needed continual care to guard against confusion. It had been heavily denuded into a long slope extending down through about 16 feet. All over this slope, Arab squatters had settled in the middle ages and left their pottery mingled with that of older levels. Not only so, but they had dug numberless grain pits, filled up later with rubbish, which might thus be 10 feet below its surface. So soon as a pit was noticed, it was entirely cleared out, and all the contents removed from contact with earlier remains. The extent

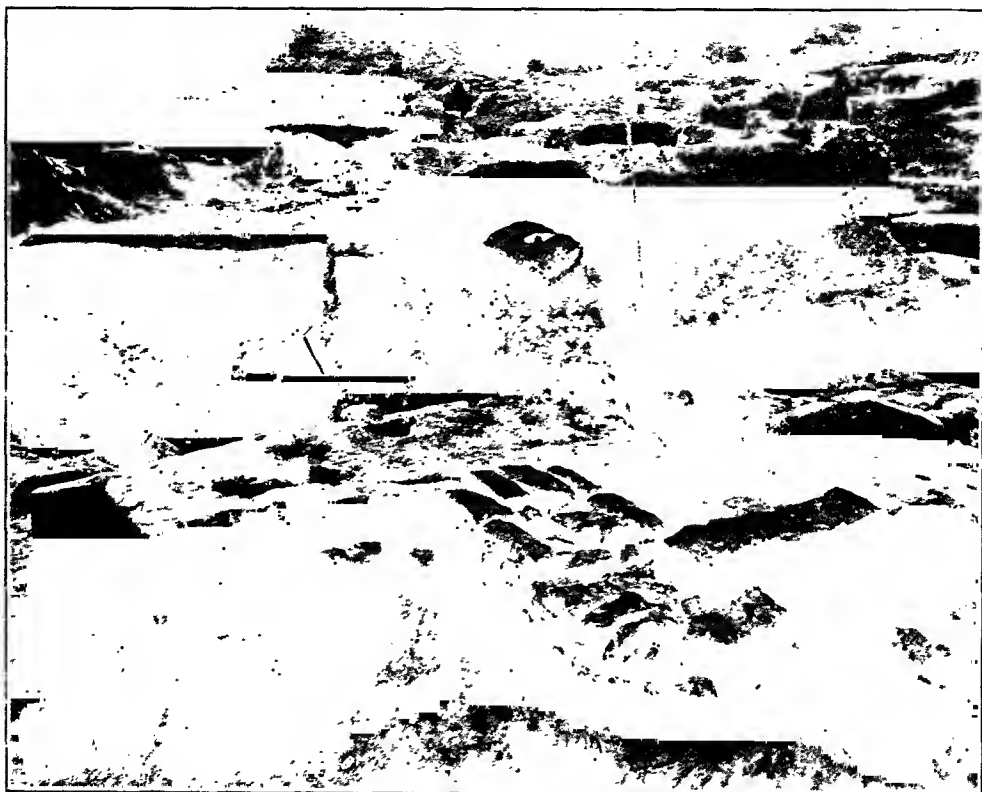


FIG. 3 —STONE BASEMENT OF THE FIRST PALACE

of scattering in higher levels by digging holes, or in lower levels by objects falling into holes, had to be guarded against. As a test, I chose one class of very distinctive foreign pottery, the fork-handled bowl (Figs. 1, 2), which is of common occurrence. This is of two clearly separate qualities, the delicate fine ware and the cheaper imitation which succeeded it. The imitation begins at 980 inches over sea level, and the fine ware ends at 1,010 inches; it is therefore only through 30 inches that they are found together. Such an overlap would naturally occur during the interval when the original fine ware was becoming copied, and superseded by a cheaper variety. Of the three hundred fragments, not 5 per cent. indicated accidental scattering. This result gives confidence in the historic value of the various strata, as linked with the evidence of the building. Unfortunately, very few scarabs were found in the tell, and none giving a precise date. We have to depend on the evidence of pottery and of Hyksos custom.

Reviewing now the whole results of this season on the tell, it would appear that the oldest remains perhaps were the pit burials in what was later the courtyard of the palace region. These had some pottery which was quite unknown in the Hyksos period, yet all of it entirely different from that of the Copper Age of the VIth dynasty.

The earliest structure was the palace, No. 1, with stone basement (Fig. 3). Slabs of sandstone about 2 feet high were set on edge, half bedded in the ground, to support each face of the brick walls. The space between was packed with



FIG. 4.—BATHROOM PLASTERED IN SECOND PALACE.

blocks, forming a basement about 6 feet wide for the foundation of the main walls, and 4 feet for interior walls flush with the edge of it. The stones formed a sort of wainscot to the wall about a foot high, visible above ground. The extent of the building is not yet fully known; it was at least 125 feet long and 65 feet wide. It was one of the largest regular blocks of building known in Palestine. The complete plan cannot yet be reached without removing some of the thick walls of later buildings.

That it was a public building is evident from the scale on which it was planned, and it is almost certainly contemporary with the Great Fosse surrounding the hill (*Anc. Eg.*, 31, i.). The cutting of the fosse would provide the stocks of sandstone for the basement. This stone is only a sand dune bound together with gypsum. That this was a palace rather than a temple is shown by a large

bath chamber, 12 feet by 8 feet, paved and lined with white plaster, and having a privy at one side. The sloping floor drained to the outside of the palace. As no earlier pottery was found here, the age of it may perhaps be that of the North Syrian invaders who formed the VIIth and VIIIth dynasties in Egypt, 3000 B.C. This is indicated by the form of the fosse, the same as at Homs (Emesa).

All later buildings were on a decreasing scale of size. The great palace having perished in the flames, only a thick bed of ashes remained. The place was deserted for some centuries, the walls all washed away, and nearly 3 feet of detritus accumulated over the stone basement. Then there came a new people to build a palace (No. 2) on the site, and they entirely ignored the old

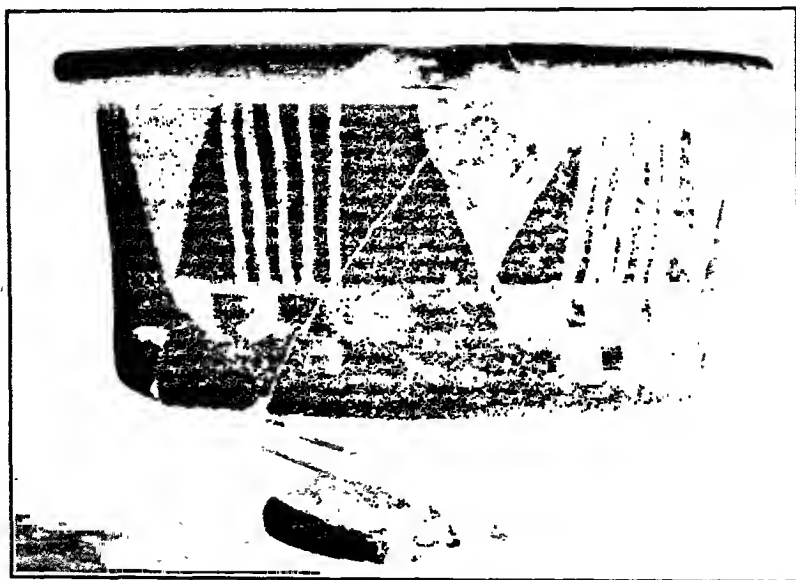


FIG. 5.—BOWL WITH WHITE AND CHOCOLATE PATTERN.

foundations. The lie of the ground made them build parallel to the old work: it was a block of yellowish clay brickwork, 65 feet by 40 feet over all. The unit of measure was the Northern foot of 13.16 inches, the base of our English land measures. The builders did remarkably regular work, and the bricks were so well made that later people took the walls to pieces, course by course, to build the next palace. The apparent stairway in the view (Fig. 4) is only the stepping of the courses of bricks where they have been regularly removed for re-use. The less massive walls of this palace make it less of a fortress, and imply a settled condition and more confident people. That this yellowish building was a palace is again shown by a large bathroom, white-plastered (Fig. 4), which drained to the outside, and had a built stone drain underground. There was also a privy. An ante-room contained storage for water, and a cobbled platform. So excellent were the bricks that the whole building was removed for later re-use, and only 2 feet of the foundations remain.

About this period there came the change in some of the painted ware imported from foreign countries. The fork-handled bowl, cited above, began with delicate lines on thin white pottery with red squares, and ended in a coarse imitation in drab, made in Cyprus. The design of a row of small squares with

cross-lines is known from Cappadocia, and so the source is probably Anatolian, and the frequency of examples shows how lively a trade flourished between the two countries. More has also been found of the black and bright red pottery with animal figures, which puzzled every expert last year at our Exhibition, but there is no light as to the source of it. The polished white pottery with chocolate-brown patterns has often been found, in small pieces, ranging over palaces 1 and 2; in the cemetery, loose in the earth, there was a fine bowl

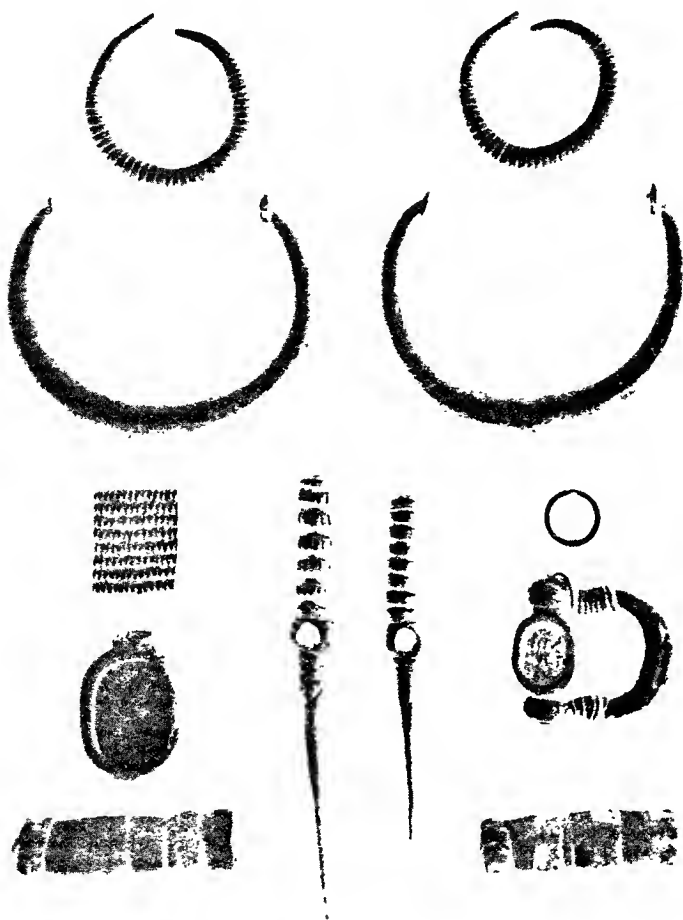


FIG. 6.—JEWELLERY FROM THE OFFERING PLACE.

(Fig. 5). The colouring and chequer pattern seem Anatolian, but there is no example of this ware yet in the Constantinople Museum. All the painted pottery was before 2000 B.C.

The destruction of the yellow brick palace was followed by the building of the black brick palace (No. 3) of more massive form, 87 feet by 30 feet. The new builders used the yellow bricks mingled with its dull grey-black, and followed on some of the internal foundations that went before, but in general the old plan was ignored. The much greater thickness of the walls implies a more unsettled condition. The west wall proved insecure, and it looks as though buttresses were added inside; these in turn leaned in with the wall, and finally

a thick lining was built against it, and the interior level raised. The first building had no door or windows in the ground floor, yet the walls were plastered with lime, which covered also the buttresses. As one buttress has traces of a reveal which projects from it, an internal doorway is suggested, and it may be that the buttresses were original features, and later the tilt of the walls pushed them inward. The only trace of outer doorway lies 80-90 inches higher, and there is no sign of beam-holes or corbelling for a roof. Probably the original entrance wall was taken down and rebuilt when the higher level of the next period was arranged.

Another large building was erected to the north, and this was built under Egyptian influence, as it is exactly 50 cubits long. Less massive buildings adjoined it, but the purpose of these is not evident.



FIG. 7.—POTTERY FIGURE OF HYKSOS AGE.

About the Late Hyksos time, a curious place of offering was set up in front of the palace. An old paving of sea shells lay there over the ashes of the first palace, earth accumulated to 5 feet thick over it, and then a brick tower was built, about 15 feet square (see the block in Fig. 1 with measuring staff laid against it). In it was a chamber lined with rough stones and a rough stone floor. On this floor lay dedicated treasures: ten gold armlets, on the Egyptian *qedet* unit, numbered in two sets of five; two large ear-rings (Fig. 6); two ribbed ear-rings, and two toggle-pins; a lazuli scarab with a winged dog, perhaps Assyrian; a black jasper scarab in heavy gold ring, with mock-Egyptian figure of Horus with *onkh* and papyrus; and a spacer plaque for eight-string bracelet. At base of Fig. 6 are two cylinders of lazuli with gold bands which probably fitted into the large ear-rings as the carrying bar. All of this is personal jewellery. The source of the lazuli is eastern, and the subjects engraved are Mesopotamian and a Syrian copy from Egypt. Until more definite connections are forthcoming, we must be content to consider these as due to Hyksos trade. A few fragments of gold work were found beneath the floor of the chamber. The whole chamber was filled up with lumps of stone to about 3 feet deep. No such offering place is known before.

The palace No. 4 was on the walls of No. 3, but the occupants threw out additions on the west and the south. They raised the floor level about 5 feet,

took out the cross walls, and rebuilt them thicker. Some of the northern buildings survived into this period. For this reconstruction, a horse was buried as foundation sacrifice, after the shoulders had been removed for eating; two other horses were entirely cut up for food, and the bones scattered on the ground. Such a sacrifice is unlikely in an Egyptian ceremony, and it plainly belongs to

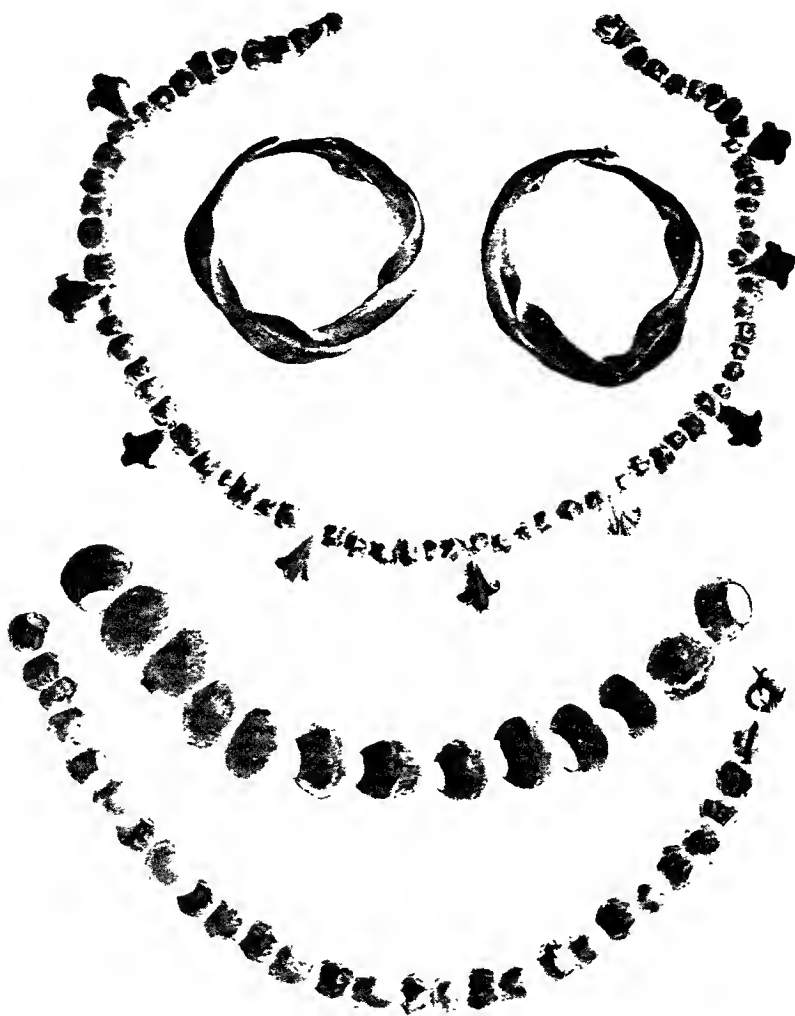


FIG. 8.—EAR-RINGS OF WESTERN DESIGN, XVIII DYNASTY.

the Hyksos, as the people who introduced the horse. Of the Late Hyksos age is the pottery head (Fig. 7) found in the tell. The sequence of buildings here points to this palace being built at the rise of the XVIth dynasty, and Palace 3 belonging to the XVth. Certainly the XVIIIth dynasty was above this level.

The scanty remains of the XVIIIth dynasty were the last buildings here. They may well have been, originally, more extensive, but they have been heavily denuded, and there is little to show of their construction.

Cemeteries on the plain below.—We had excavated one cemetery of the

Copper Age (3500 B.C.) in the previous season. This year we made soundings along the north and west sides of the tell, for any further cemetery of this period. At a furlong away on the west, we at last reached ground which had served the early inhabitants for a cemetery in a suitable stratum of marl. There were about fifty tombs with square shafts leading to shallow chambers, and in half of them were copper daggers in perfect condition. The largest was 16 inches long; most of them had a mid-rib with hollowed sides, some had blades ground flat, as thin as card, with a deep mid-ridge, and others were only convex on the sides.

A remarkable deposit, dating from perhaps a thousand years later, was found between the cemeteries. A great burning had been made; into it were thrown two of the finest basalt tripod stands (Fig. 11), an alabaster vase and slate dish, all smashed up, and a great quantity of gold and silver work which became mostly melted. To emphasize the destruction, all the gold plating had been



FIG. 9.—ALABASTER VASES, XVIII DYNASTY.

torn into the smallest fragments. The whole valuable property had been devoted to destruction, regardless of its value. It was neither a burial nor a hiding-place, nor loot, but the execution of vengeance on property which had to be annihilated for the common good. The parallel to the history of Achan (*Josh. 7*) is obvious; some man had brought ill-fortune to the community, and all that he had was accursed, and was to be ruthlessly destroyed. This expurgation was in such cases a Palestinian custom, then, which came into usage among the Israelites.

Many graves of the Hyksos period were found scattered in various parts, but they did not add much to our knowledge.

The XVIIIth dynasty cemetery was richer in objects. Some ear-rings (Fig. 8), with carnelian beads and gold lotus pendants, are of a type well known in the torques of Ireland and Gaul; the cross form of the section was made by bending two strips to a ∇ groove and soldering the bands together, λ . The shape was ill suited to a curve. In the tombs there were also alabaster vases of the usual forms, some of which are in Fig. 9. The cemetery had in one part a border of shells (Fig. 10), which ran as a straight boundary for 100 feet. The overturned shells above it probably fell from a slope, on the left, owing to denudation. The whole area has been heavily denuded.

In the season which is just closing, we have gleaned as much history as we

were led to expect. We were in search of palaces and have found them. In many periods, 3500–1500 B.C., we have secured a large advance on last season, and the prize now awaiting us is the site of the temples. There we ought to find

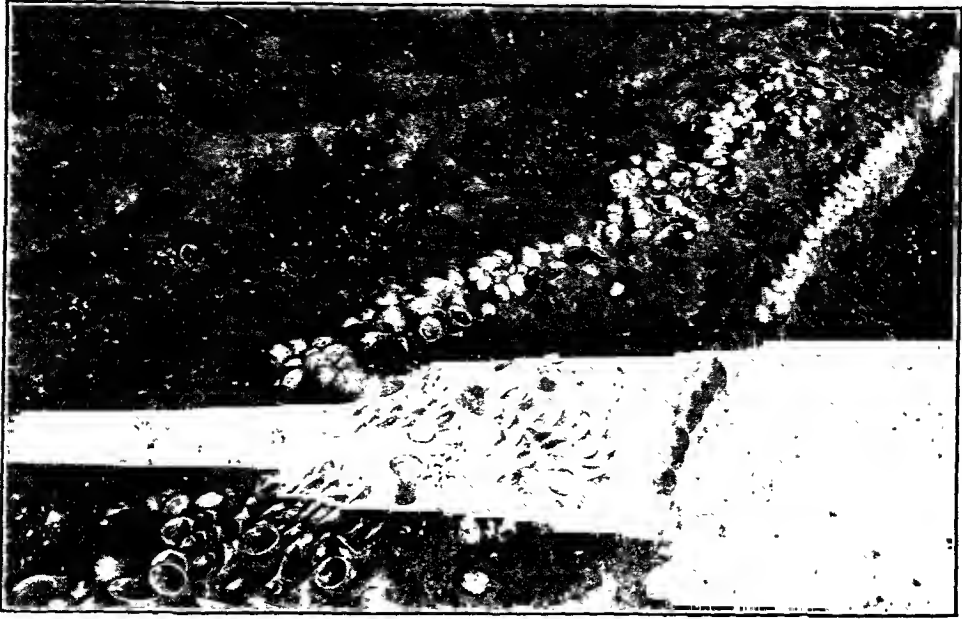


FIG. 10.—SHELL BORDER TO CEMETERY.

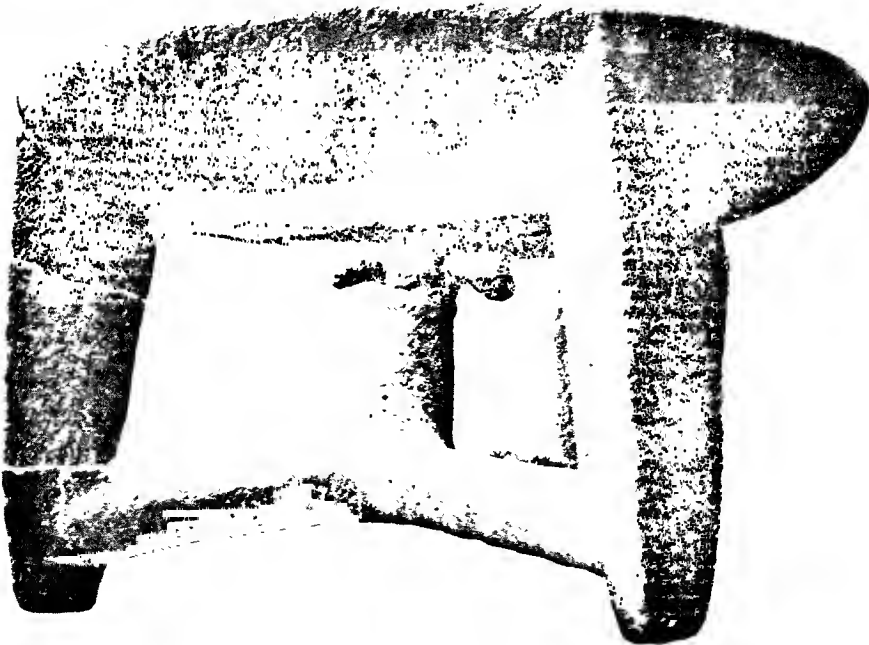


FIG. 11.—BASALT STAND, FOUND WITH "ACHAN" DEPOSIT.

the historical material for fixing better the period of each of the great palace buildings already brought to light.

Tell el Ajjūl, Gaza.

FLINDERS PETRIE.

ANCIENT DEFENCES OF TELL EL AJJŪL.

THE defences of Tell el Ajjūl, the ancient Gaza, comprise at least four separate enclosures. Further excavations may reveal others.

The tell was protected on the south-west by the Wady Ghazzeḥ. Round the remaining three sides a ditch, the Great Fosse, was excavated anciently, and the earth thrown up on the face of the tell, to form a slope of about 35° . A section of the ditch has been cleared to a depth of about 20 feet, and it had a flat bottom. The counterscarp, or outer slope of the ditch, was found to be at a slope of about 4 in 1. The distance from the top of the counterscarp to the estimated top of the wall on the mound was 150 feet. From the top of the wall to the bottom of the ditch was probably about the same. At the given slope of 35° , this would make the level of the top of the bank 90 feet above the bottom of the ditch. The length of the ditch round the three sides of the tell is about $\frac{3}{4}$ mile.

There is reason to think there may have been an entrance on the west corner, now denuded away by the rains of 4,000 years. However this may be, it appears that the chief gate was on the north-east side, incidentally the weakest, owing to the nature of the surrounding country.

To north and south the tell overlooks and completely dominates the neighbourhood. This dominance is due to the height of the wall thrown up by excavation of the ditch. The probability is that originally the tell was only about 15 feet in height. For instance, the land a few hundred yards N.E. of the tell was 65 feet above sea-level, rising in one place to 77 feet. Inside the tell one level shows 80 feet only, and the stone base of one of the excavated buildings is only 78 feet. These figures can only be approximate, as the levels of the surface have altered in the course of time, but they give some idea of the position. Some parts of the thrown-up bank now exceed 100 feet above sea-level. To south and west the present level outside the tell does not exceed 50-55 feet. It will thus be seen that the site is chiefly indebted to artificial works for its undoubtedly strong position.

On the N.E. the ground is undulating. The sand had encroached and covered the old surface to a depth of several feet, and prior to this encroachment there had been denudation, probably of 6 or 8 feet, at a very early time. It is not easy to visualise, without a great deal more digging than has yet been possible, the surface as it must have appeared about 4,000 years ago.

One is probably not far wrong in suggesting that the ground in this direction would have offered a certain amount of cover to a besieging force. From the top of the tell to-day there is a good deal of dead ground in that sector, and an enclosed work beyond the city, to deny this ground to an enemy, would be a natural assumption. There have, in fact, been found traces of such a work, in this direction, about 500 feet from the gateway. It has peculiar features. Instead of excavating a ditch and throwing the excavated earth inwards to form a bank, it would appear that the defenders reversed the process. A deep pit was dug and the earth may have been thrown outwards to form the bank. Its disadvantages are obvious, but that is what appears to have been done.

The work was not more than 40 yards across ; the great depth inside, therefore, would have given perfect protection from archery. There would appear to be no doubt that this was a self-contained outpost.

Some readers will remember that last year a tunnel was discovered leading from near the gateway to this pit or ditch.* This tunnel is about 4 feet broad and 5 feet high, and about 500 feet long. The excavations of the present season would seem to give an explanation of its purpose. Instead of its coming out into a fosse which was presumed to be outside some work, it is now fairly clear that it comes out right into this work, since this fosse turns out to be the interior of the work itself. Troops and supplies could therefore be rushed, in time of emergency, from the city to the outpost. As already stated, the object of this outpost, holding possibly a hundred men, would probably be to deny ground to an enemy and so prevent a surprise attack on the main position.

There is also a sunken road leading towards this pit from the direction of the tell. It starts from the level surface and gradually drops till it is about 6 feet down. At this point it runs parallel to the side of the pit. As it is 6-7 feet broad it was probably used for horses or donkeys with supplies. The very fact of the existence of such an inclined roadway supports the idea that the object of the deep pit was to give cover to animals. An ordinary ditch outside, with level ground inside, would give insufficient cover in such a small work, for animals. The defenders would, of course, man the bank, but it would be an awkward place to command. However there seems little doubt that it was a detached outpost.

A few hundred yards further north, *i.e.*, about 150 yards from the N.E. angle of the tell, is a similar pit. This is apparently about the same size as the other. It would appear to have served a similar purpose, *i.e.*, to hold an outpost. The lie of the land supports this view, but up to the present no tunnel has been found leading into the city.

In this connection it is interesting to note that a second tunnel has been discovered, running from the great fosse of the city at a lower level than that already described. It appears to run nearly parallel to it, and is probably a substitute for the higher tunnel which had in this part been washed away by denudation. One cannot help wondering whether it connects with this second pit. Both pits are about 500 feet from the main entrance to the city. One is connected by tunnel. Why not the other ?

This N.E. work has various tombs cutting across its trenches, which in some parts were badly denuded away before the burials took place. For instance, XVIIIth dynasty pottery has been found in a tomb cutting a trench. Middle Hyksos pottery has also been found in a similar tomb, and that work is earlier, therefore, than Middle Hyksos. The pit outpost has yielded Early Hyksos pottery (2300 B.C.). The present opinion is that the tell fosse, the tunnel, and the pit outposts are all of the Copper Age (3500-3000 B.C.) or shortly after.

The northern trenched enclosure seems to be on rather a different footing. Its age is quite uncertain. As it includes within its perimeter the pit outpost, it is almost certainly subsequent to the latter. It cannot be later than Bronze Age, because in the time of the Hyksos Kings it had already been greatly denuded by rain, and was used then as a cemetery.

An entirely different system of trenches is to be found off the N.E. corner

* It ran between two cemeteries, and passed just outside the limits of the Copper Age tombs which lay to the south of it. North of it, the tombs were of the Bronze Age (Hyksos).

of the tell. These comprise an enclosure about 200 yards long by 70-120 yards broad. Owing to denudation, only about the last 18 inches of the trenches remain. Who used them, and why, is unknown. The second pit, above mentioned, is located within this enclosure, but the work is entirely different. Instead of an excavated pit with a curving but irregular outline, these appear to be ordinary trenches running in long straight lines. Their object may have been, like the two pits, to give added strength to the entrance of the city. The siting encourages this belief, since any attack on the entrance would find this long work 100 yards away on its flank.

West of the tell, the ground was searched for cemeteries of earlier periods, and that of the Copper Age was found. Up to the present, no copper implements beyond those tombs have been discovered at Tell el Ajjūl. As the people were buried here, they must have lived in the neighbourhood. At any rate, they appear to have put up good defensive works and were probably a powerful tribe.

There is reason to believe that further digging may discover something more of the Copper Age people who put up these grand works—assuming they are the people who built them. The whole question is fascinating in its complexity.

N. P. CLARKE, Lieut.-Colonel.

[The enclosure containing the second pit may have been a *zariba* for securing cattle, but this and many other matters as to these defences would need more research before conclusions could be reached.—ED.]

STATUETTE OF PEPY FROM SAQQÂRA.

THIS statuette of black basalt, 0.19 m. high, was discovered at Saqqâra in 1907, and is registered in the *Journal d'Entrée* of the Cairo Museum as No. 39143. It is remarkable not only for the fine rendering of the clasped hands,* but in the position of the legs, which I believe is unique in Egyptian statuary. As will be seen in the photograph below, it was made to engage in a stand, probably



of wood, and it will be noted that the right toes project beyond the roughly cut base. At the back is a tapering pillar, bearing the inscription

UAB HERT PEPY AR NE MUTSENT (SENTMUT).

I find it very difficult to assign a date to this statuette. It may be Saitic (XXVIth), when aberrant forms are fairly common, but I should be more inclined to believe that it is of the First Intermediate period (VIIth–XIth). It is unlikely to be Middle Kingdom, since in that period the apron is wound round the body in the reverse direction to that of the statuette.†

R. ENGELBACH.

* An almost exactly similar treatment of the hands is seen in the kneeling scribe in the Cairo Museum, published by BORCHARDT, *Statuen und Statuetten* (Cat. Gén. du Musée du Caire), No. 119.

† ENGELBACH, *Annales du Service* XXIX., p. 32.

A TOWN IN OLD NUBIA.

ON the east bank of the Nile, some fifteen miles north of Wadi Halfa, stands the deserted mud town of Sarra which, though full of interest, is almost unknown except to archæologists and to the native inhabitants of the neighbouring villages. Nor is Sarra alone in this respect, for there are other similar sites in Nubia, past which the tourists steam all unheeding. Perhaps the reason for this obscurity is not far to seek, for to the uninitiated there is here only a jumble of mud ruins that look insignificant to those who have seen the wonders of Karnak by moonlight or the colossi at Abu Simbel waked to life at sunrise. Until a few years ago even the archæologists viewed such a place with disdain, for the remains are mostly of the mediæval Christian period, and little merit was to be acquired by excavating a Coptic church. The broad outline of the history of such places as Sarra is quite a common one in this part of the Nile valley, but at the different sites the remains of one particular period often predominate.

From time immemorial the Nile has been one of the great African highways, and by the VIth Egyptian dynasty there was a considerable volume of trade passing between Egypt and the Sudan. Of this trade the various riverain tribes took what tax and toll they could, until they became so extortionate that much of the traffic was driven from the waterway and passed by caravan along such routes as the famous Forty Day Road in the unfrequented western desert. The strong kings of the XIIth dynasty, determined to suppress the brigandage of the river folk and to bring the trade back to the quicker and more convenient route, built a chain of fortresses, of which Sarra was one, between the first and third cataracts. In the vigorous days of the XVIIIth dynasty most of these fortresses were strengthened and enlarged, and in later times were in turn occupied by Ethiopians, Romans, Christian Nubians, and Turks, while a few of them were garrisoned even in Dervish days.

Sarra, during the XIIth dynasty, consisted principally of a rectangle of about 360×300 ft., enclosed by a strong mud wall. The site (Fig. 1) is on a natural platform of rock sloping upwards to the east, away from the river; the western side of the fort lies on the river's edge, and it slopes some sixty feet higher, so that from the opposite or western bank it is possible to look right into the fort. It is quite common to-day, on the Nile, to leave a site unlevelled before building so that, from the deck of a steamer, you can often look down into the courtyards of the houses. There is now nothing to prove whether the enclosure wall was continued along the river bank, or if the fort was exposed on this side. There remains, however, about seventy-five feet of stone pitching which clearly indicates an old quay or embankment, and perhaps the mud wall stood on this. A diligent search failed to reveal any remains of the covered staircase giving access to the river, which was a usual feature of the XIIth dynasty forts and ensured a water supply, even in times of siege, at all stages from flood to low Nile, and incidentally would serve also as a river gauge.

Outside the wall (Fig. 2), and parallel to it at a distance of a few yards, ran a ditch that was cut into the rock some twelve feet deep on the eastern side, while it tapered away to nothing at the water's edge and was about ten feet wide. This ditch would serve the same purpose as a moat, though it must have been always dry, for to have filled it by inflow from the river would have meant a



1. GENERAL VIEW OF SARRA.
2. THE NORTH WALL.
3. THE NORTH-EAST CORNER.

depth of over sixty feet on the eastern side. The ditch is now in places choked with sand, but its course can still be followed quite easily, and the original mud wall, though nearly five thousand years old, is still standing, often to a height of twenty feet. In the middle of the ditch on the north side a gateway was cut ; there may have been others on the east and south sides, but this is the only one of which there are now any traces.

The wall, which was built of mud bricks, or blocks rather (for the XIIth dynasty brick was very much larger than our modern brick), must have been a massive structure about thirty feet high and fifteen feet thick at the base. The bricks were not laid in horizontal courses, but followed the contour of the ground and, as the rock platform shelved up from the river at an angle of about 20°, the wall, on the north and south sides, looks as though it has experienced a severe landslide. In old Nubia there are several examples of these XIIth dynasty mud walls, and it is amazing that they should be still standing as, according to our standards, they were badly constructed. The single factor contributing to their preservation has been the extreme dryness of the climate for there has fallen hardly a drop of rain here since the days of the Pharaohs. The bricks were not bonded, as we understand the term, but were laid in a series of vertical laminations ; this defect in design was corrected, to a certain extent, by sandwiching in grass mats through the thickness of the wall at every ten courses or so, and also by tying the bricks transversely with trunks of palm trees, the bricks being all stretchers and the palm trees and grass mats acting as headers. The sun-dried bricks, of Nile mud mixed with chopped straw, are to-day almost as good as when they were first made, but most of the palm-tree headers have been eaten away by white ants, which left little tunnels through the wall.

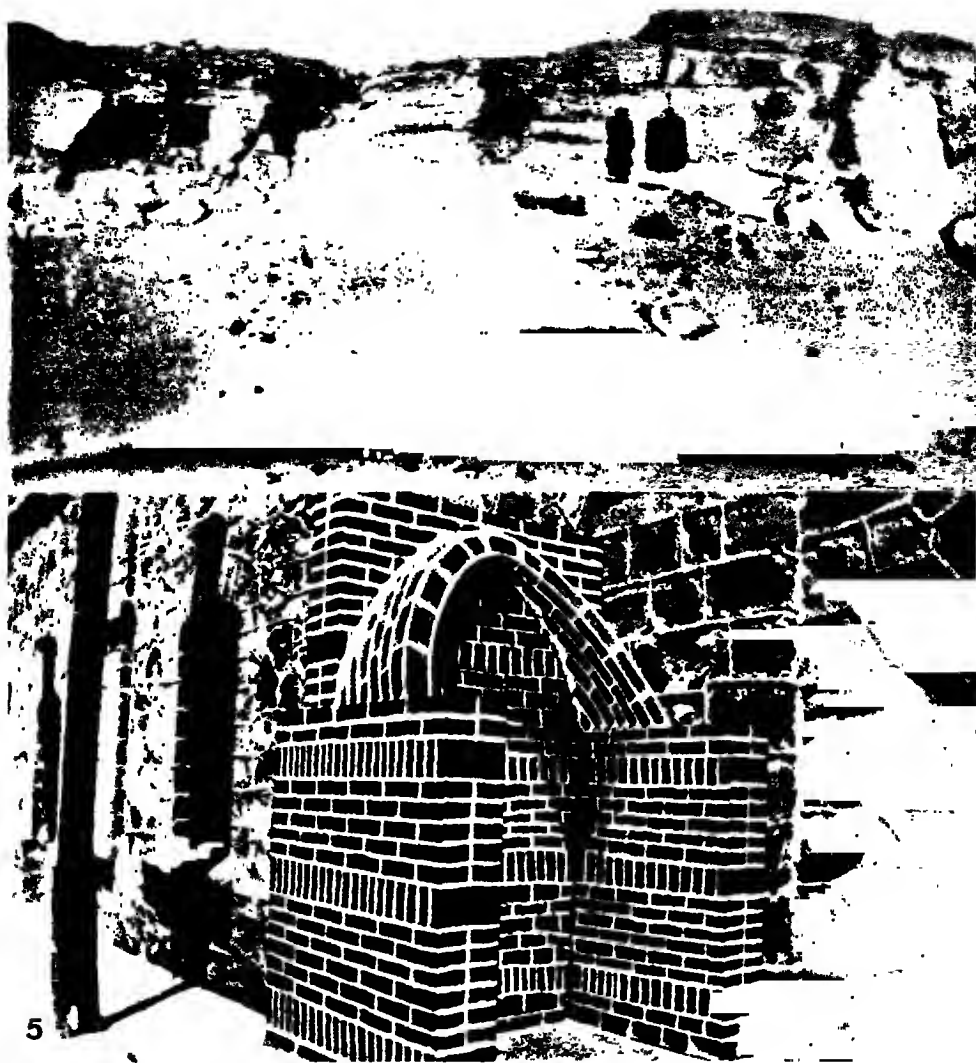
Inside such a fortress (Fig. 3) the principal buildings were the castle or governor's house, of mud brick and, particularly from the XVIIIth dynasty onwards, the temple built of stone. Substantial remains of what might well have been the governor's house are still standing in the north-east corner, but there are now no signs of an ancient Egyptian temple, though there can be very little doubt that there was one, as sculptured stones of dynasties XVIIth-XXth were used in building Christian tombs about two miles to the south, in the village of modern Sarra. Just across the river at Sarra West, as it is now called, a fine temple was built by Rameses II, but this was completely ruined before Christian times.

From the XVIIIth dynasty onwards, Sarra was occupied successively by Egyptian, Ethiopian, Meroitic, and perhaps Roman garrisons, but, except for the old wall and some of the houses, most of the remains are of the Christian period, sixth to sixteenth centuries.

Though missionaries from Alexandria penetrated the Sudan from the first century onwards, it was not until the middle of the sixth century that the country, from the First Cataract to Sennar on the Blue Nile, became Christian. From this time there were established, along the banks of the Nile, Christian colonies that were really ecclesiastical towns ; Sarra is one of the few of which anything interesting remains.

The Christians, wherever possible, made full use of any available earlier material, and converted ancient temples to churches or chapels, and tombs to hermits' cells or anchorites' grottoes (Fig. 4) ; that is why we find a XIIth dynasty fortress forming the nucleus of one of their settlements. At Sarra they overflowed the original fortress, except on the river side, and three of the four churches are outside the old walls.

Christian architecture in this part of the world was, for several reasons, very crude and primitive, with the result that the remains are nearly always more interesting than imposing. In its early days in Egypt, Christianity was necessarily a hole-and-corner religion ; its adherents were relentlessly persecuted and, in the towns, the churches were in insignificant corners of dark courtyards



4. THE ANCHORITES' GROTTOES.

5. TILTED BUILDING OF AN ARCH.

and back streets. The Christians could boast no architects or builders, and the quarries from which the stones for the great pagan temples were hewn all belonged to the Government, and were worked by slave or convict labour. Although later on, when Christianity was established as the State religion, imposing stone churches and monasteries were built here and there, yet in general the earlier mean style in mud brick persisted. One of the reasons was the warped mentality of the ecclesiastics themselves who, as often as not, were

fanatics who had fled southwards from the distractions of Egypt to the comparative calm of Nubia. A contemporary church chronicle relates how Father Pakhomius, an abbot of Upper Egypt in the fourth century, put his heart and sinews and soul into the building of a church to the glory of God. When it was finished he saw that it was good, but on reflection he hastened to pull down his beautiful little church on the grounds that its very beauty was a sinful lust of the flesh. In a life that should be given to the service of God, there was no place for admiration or even contemplation of the work of man.

At Sarra there are remains of four churches, known as the North, the Central, and the two South churches; of these, the Central church is the only one within the XIIth dynasty walls. The churches in Nubia conformed in the main to a common type, though there were sometimes minor modifications in detail. They were all of basilican, or dromic, plan, with a nave and two side aisles, and with an east end sanctuary or haikal that enclosed the altar. Out of more than a thousand churches there is only one known exception to this rule, that of a little church up the Second Cataract, which was square with a domed roof, just like a sheikh's tomb. Generally the churches had vaulted roofs in three spans, one vault over the nave and one over each aisle; not infrequently there was a central dome, or rather drum or lantern with domed top as well. Often over the aisles and west end there was a gallery, and the nave was then twice as lofty as usual; the western half of the south aisle would be sacrificed to make room for the staircase leading to the upper storey. Sometimes the churches were built wholly of bricks made of Nile mud mixed with chopped straw, and sometimes with the lower courses, to a height of eight feet or so, of rough stones, and finished as to the vaults and domes in mud brick. The method of constructing the mud vaults is interesting and has been used, particularly for covering tombs, from very early times. Instead of using, as we should, a wood centring for the arch, the end wall is built up rather higher than the finished roof and on this wall is marked, in mud mortar, the curve of the arch (Fig. 5). From each of the side walls, by two men working in conjunction, a brick or half a brick is then laid leaning against the end wall, inclined from the vertical about 20° , and also canted inwards sufficiently to keep it on the curve marked on the end wall. Against these initial bricks are laid successive courses starting alternately with a brick and half a brick, to break the joints, and all similarly inclined from the vertical and canted inwards until the work of the two builders meets in the middle of the end wall at the crown of the arch. Once the first complete ring of the arch is built, the rest is quite simple and any length of vaulted roof can be built by adding the required number of rings. The results are surprisingly good, though the whole is done solely by eye without any aid of squares, compasses, or even a string. Sometimes a plank or pole bridged the space between the side walls, and by standing on this it was possible to build an arch of greater span; otherwise the size was determined by how far a man could stretch from each side wall. As the ratio of the height of an arch to its span was generally about three to five, even a tall man could not roof a building that was more than twelve feet wide. It will be seen that vaults built by this method are necessarily aslant, in a series of laminations like a pack of cards that has been tilted.

Inside, the churches were invariably mud-plastered and white-washed, and the walls were covered with paintings of evangelists and saints or with prayers and texts. These paintings, which were in bright blue, green, red, and yellow, were sometimes very crude, and sometimes of a high standard;

whatever their merits, they were always striking and effective ; unfortunately, very few of them are still complete.

One of the most curious features of Nubian churches is their small size. One of the largest would hold fifty people ; the best example that survives, near Wadi Halfa, would have been filled to overflowing by a congregation of eight ! Perhaps in those days Christianity was esoteric, and while the initiated or communicants were allowed to attend the services in church the others had to listen as best they could outside. Except in the larger churches which were furnished with pulpits there were probably no regular services, and the churches were regarded more as chapels or shrines where prayers and thanksgivings could be offered at any hour. Perhaps the churches though small were also so numerous as to be able to accommodate everybody. A number of small churches in preference to a single large one seems to be a Byzantine feature and though, after the Arab conquest of Egypt in the seventh century when Nubia was cut off from Constantinople, the Byzantine tradition in this, as in other respects, persisted, it possibly indicates a monastic plan as opposed to parochial design. It must be remembered also that in those days they were inveterate and querulous hair-splitters ; if anyone with two or three followers wished to form a new school, it was a simple matter to build a new mud church. Still another explanation is that the Nubians were as poor as they were pious, and churches which were built and endowed by legacies were necessarily of a size determined by the amount available. It may also be argued that churches built entirely of mud, with vaults and domes, must always be small.

The four churches at Sarra are all of them domed, and are built throughout of mud brick. The North church (Fig. 6), just outside the old fort on the north side, is the most conspicuous, for it is built on a platform of rock. From the outside it appears to be in a good state of preservation, as vaults and dome are still intact, but inside most of the plaster has flaked off the walls and the paintings have disappeared ; here and there, notably on the soffits of the arches dividing the aisles from the nave, there remain fragments of heads and haloes. The nave and aisles are each 10×5 feet, and the church would hold about twenty-five or thirty people. The sanctuary or haikal, sacred to the chief priest, is a prolongation of the nave, and the aisles being similarly extended form a sacristy on either side ; these are connected with the haikal by archways through which a full-grown man can just squeeze.

The Central church (Fig. 7) in the middle of the old town is, as regards plan and condition, the same as the North church except that it had galleries over the aisles and west end. The vaulted roofs of the aisles are 7-8 feet high, but the central nave is comparatively lofty, being about 20 feet to the top of the dome. The South church, just outside the south wall of the old fortress, is really a block of two churches, but here all the vaults and domes have collapsed. Nevertheless one of these southern churches can boast a very interesting feature not possessed by the other three, in that its altar is still intact. This altar is a solid cube of mud, 3 feet high, out of the back of which are scooped two niches like aumbries which no doubt held the sacred elements, the two cavities perhaps indicating a double dedication to two saints.

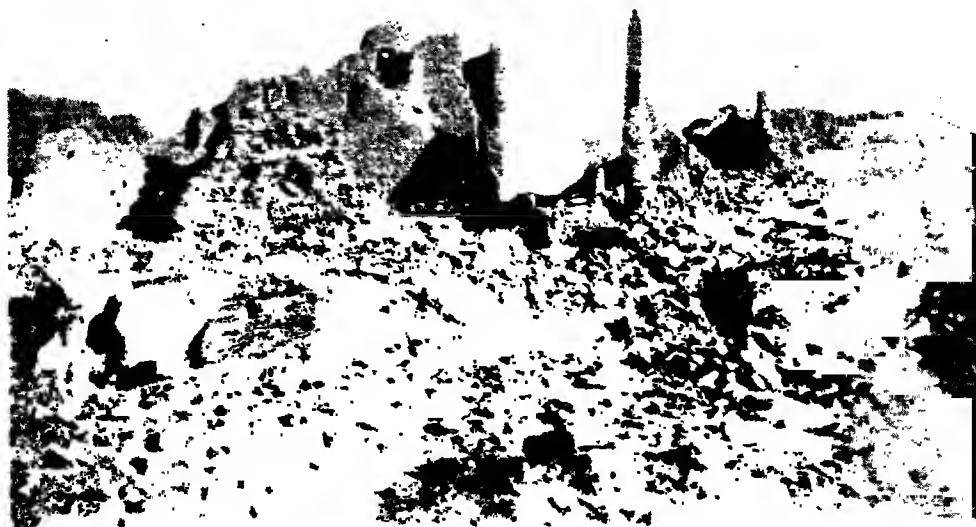
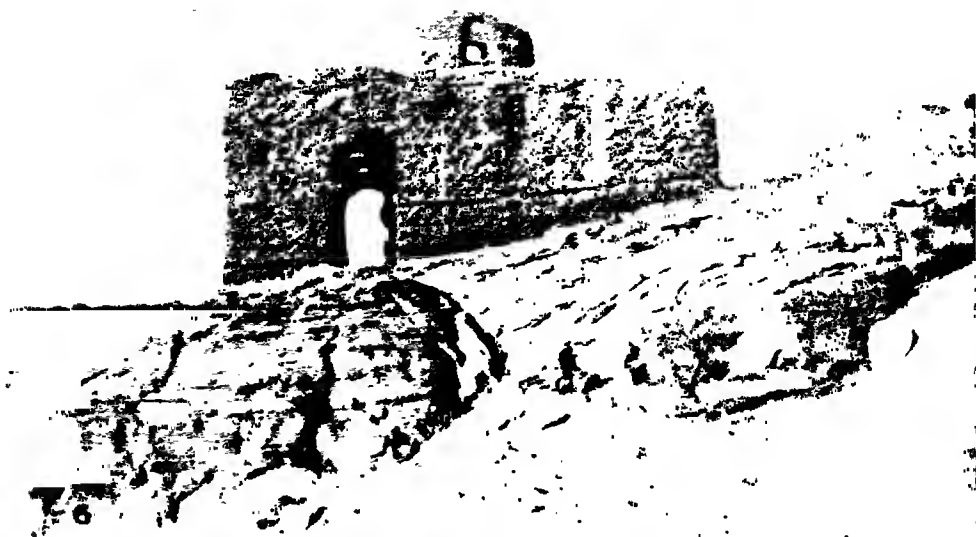
To the east of the South church, and about 300 feet from the south-east corner of the old wall, is a group of shaft graves sunk into the solid rock to a depth of 12-15 feet, each shaft giving entrance at the bottom to one or more rock chambers. The Christians were known to hew graves out of the solid rock for their more important burials, but these shafts and tombs were cut by

the ancient Egyptians; when they were explored, twenty years ago, it was found that they had been used for secondary, and even tertiary, interments, for in them were found canopic jars of the XVIIIth dynasty, Meroitic pottery, and Christian lamps and beads. Perhaps they had a further history and were cut by the XIIth dynasty founders of Sarra. Some of the shafts look like modern graves and would take a coffin horizontally, others are square, or round, like well shafts; into these the body must have been lowered head or feet first, and footholds are cut in the sides of the shaft. Sometimes, in tunnelling, entrance was made inadvertently into an existing tomb, for when, a year or so ago, a small native boy was put into one shaft he next appeared at the mouth of another. In Christian times the mouths of the shafts were covered with mud-brick vaults, in shape just like family vaults in any present-day cemetery, but most of these vaults have fallen in long since. On the rocks round about the shaft graves a few graffiti in Arabic are to be seen, but they are of no importance,

In the midst of these graves is a sheikh's tomb some fifty or sixty years old, the burial place of a holy man named Sheykh en Nur or Saint Light, for such was his sanctity that he gave out a phosphorescent glow! Strangely enough, when the inhabitants of the Mohammedan village of modern Sarra, two miles to the south, make their pilgrimages or sacrifices on such occasions as births, marriages, and deaths, they do not go to the tomb of Sheykh en Nur but to a spot just below the Central church in old Sarra. No doubt there is in this an unconscious persistence of Christian tradition, for Nubia was Christian for a thousand years and has been Mohammedan for only four centuries.

The traveller Burckhardt, who followed the banks of the Nile as far as Dongola just over a hundred years ago, wrote of Sarra: "... the ruins of a small Arab town close to the water, enclosed by a thick brick wall. After the promulgation of the Mohammedan creed the greater part of the Christian inhabitants of Nubia having either fled or been killed, a few embraced the religion of the invaders and their descendants may yet be distinguished at Sarra." From the Arab conquest of Egypt in 641 the Moslems repeatedly attacked Nubia, yet the tide of victory ebbed and flowed and the Nubians just as frequently took the offensive against Egypt. Though the Moslem invasion of Nubia in 1287 dealt a particularly severe blow to Christianity, nevertheless, when the main expedition retired to Egypt, the Christians were sufficiently strong to rise and drive out the garrisons left behind. The last Christian king who had any serious claim to paramount power was gathered to his fathers in the fourteenth century; the next hundred years saw Islam supplanting Christianity, yet the older faith did not finally succumb until 1517, when Nubia was squeezed out between the Turks from the north and the Fungs from the south. From the sixteenth century Nubia has been Mohammedan, and old Sarra has been abandoned, for the Sarra churches were never converted to mosques as sometimes happened. There is nothing peculiar in the customs, appearance, or speech, of the inhabitants of modern Sarra. There are here no rosy-cheeked, fair-haired, blue-eyed children as there are in Palestine. Miss Edwards in "*A Thousand Miles up the Nile*" (p. 356, 2nd edition, Routledge, 1888), writes: "... At Ibrim as at Derr (about sixty-five miles north of Sarra) there are 'fair' families, whose hideous light hair and blue eyes (grafted on brown-black skins) date back to Bosnian forefathers of 360 years ago." We have seen an albino in Halfa and another in the Red Sea province, but a diligent search in the villages of lower Nubia has, so far, failed to discover man, woman, or child, with fair hair and blue eyes. Inquiry from one "oldest inhabitant"

elicited the question: "Did you say red hair and blue eyes or blue hair and red eyes"? It is only fair to add that a few years ago there was employed in the Wadi Halfa dockyard a native sailor from these parts who had red hair, but no one remembers the colour of his eyes. Such was his physique that he was nicknamed Abu Simbel!



6. THE NORTH CHURCH.

7. THE CENTRAL CHURCH.

Just south of the shaft graves, and running east and west down to the river, is a narrow rocky *khôr* or defile in the sides of which are hewn a few small chambers. These were hermits' cells, and were occupied by monks who wished for greater privacy than was afforded in the town. They did not care to be too far away from the river on which depended their food and drink, or from a place of refuge in time of danger. They are but mean habitations, mere burrows, when compared with the ancient Egyptian rock graves and memorial

niches at Faras, five miles north, which were converted to a similar use. There the walls were covered with prayers and texts painted in Greek and Coptic. To the north of the walled enclosure there is a similar but narrower *khôr*, but here there are no traces of anchorites' grottoes. It seems curious that anyone should have gone to the trouble of cutting a ditch, surrounding the old fort, out of the solid rock when these natural trenches could have been made to serve the same purpose with much less labour. Probably these formed the first line of defence, and this supposition would bring the ancient Egyptian cemetery outside the fort and yet still protected, between the inner and outer fosses.

Inside the XIIth dynasty walls and surrounding the Central church is a jumble of ruined mud buildings. Some of these are of the same period as the walls, and one of them is so imposing that it might well have been the governor's house or castle. Others are of Christian times, and many seem to have been of basilican plan with vaulted roofs, so that perhaps there were originally more than four churches. Others were built half under and half above ground, being cut in the rock platform; the rock shelved upwards to the east, and the mud superstructure has fallen in.

When Sarra was excavated twenty years ago, no discoveries that are generally associated with Egyptian excavation were made. Apart from the material from the shaft graves, there were no finds of intrinsic worth. The churches yielded only a bronze cross, a piece of leather book-binding, a fragment of parchment on which were a few Greek letters, and a pair of iron tweezers with two iron skewers hung on a ring. In one of the churches was found a ponderous red granite block, $4 \times 3 \times 2$ feet, hollowed out on one side as a shallow trough about 4 inches deep. It is thought that this block, which is devoid of inscription, was originally a votive table in an Egyptian temple, no doubt in one of the temples at Sarra East or Sarra West. It was adapted by the Christians for use as an altar or as a stoup for holy water, and is to-day a font in the English church, or rather just outside the church door, at Wadi Halfa. It seems strange that a Christian church should boast a font that is more than three thousand years old. Though not discovered there in 1912 when the site was excavated, the most important of the Nubian Christian manuscripts that survive seem to have come from Sarra. These were not all necessarily written at Sarra, and some of them were taken there for safety from Edfu during the severe persecutions in Egypt of the early eleventh century. Frequent visits to Sarra in the course of the past year have rewarded us with many fragments of good pottery, a piece of a black marble bowl, a stone pounder or muller, and a few beads. The pounder might be of any age, as such implements are common to all periods from dynastic times to the present day. The pottery was all Christian, and mostly of the usual shades of red with varying patterns in black; one piece was light terra cotta in colour, and ornamented with Coptic crosses in black.

As far as we know, the suggestion has never been made that Sarra was a monastic settlement, though there are many good reasons for thinking that such was the case. Although very little is known of the plan of a monastery in Nubia, there is no doubt that a monastic settlement comprised essentially a self-contained and self-supporting community within a walled enclosure, the wall serving partly as a defence and partly as the means of religious seclusion. In addition to the monastery, which might have been a single church or might have included a parent church with dependent chapels, there were all the necessities for a cenobitic establishment. There were houses of which one was often much stronger than the others, and served as a keep or inner defence;

a garden for vegetables, fruit trees, and vines, for even in Nubia the monks had a pretty taste in wines and liqueurs; corn and oil mills, no doubt like those we see all over the east to-day; a pigeon loft or dovecote, and perhaps beehives as well; accommodation for cattle that, then as now, would go out to graze during the day and come home in the evening; generally a well, though not necessarily so, if the settlement were on the river bank; and, moreover, a refectory, kitchens, and workshops. It might seem that all this would take up a large amount of room, but it must be remembered that everything was on the smallest scale, and the Nubians have always had a genius for compressing the maximum of life and property into the smallest possible space.

There is no reason why all these monastic requirements could not have been fulfilled at Sarra; on the contrary, everything indicates that they were. In the north-east corner, where we previously located the governor's house, the keep would stand; with the monastery along the south wall where the ruins are still two and even three storeys high, and the area surrounding the central church crowded with a complex of buildings. There was still room for cultivation to a depth of 200 feet to the river bank. It is reasonable to suppose that the hermits would have taken up their abode close to a monastic settlement, rather than just outside a town. Had Sarra been an ordinary Nubian parish, we should have expected to find a font in at least one of the churches, nor does the finding of beads necessarily argue the presence of women, for they might well have been rosaries. Even if we admit the women they could have been nuns for there were, in the Nile valley, convents as well as monasteries. The parish of Sarra East was no doubt a mile or so to the south, where there is still standing the ruin of a church much larger than any of those at old Sarra.

In the absence of inscriptions, it is difficult to say with any degree of certainty when, or for how long, Sarra was occupied by the Christians. The earliest Christian find in the neighbourhood was a painted wooden panel from a church at Halfa attributed to the seventh century, while the latest was the tombstone of a priest from Faras, five miles to the north, dated 1181. At Faras there are Christian inscriptions from the eighth century, and in Debeira church, between Sarra and Halfa, was found the tombstone of Peter the Deacon, dated 1029, while the latest Christian monument in all Nubia is a Greek tombstone mentioned by Junker and dated 1248. It is generally agreed that most of the Christian remains in the locality are of about the ninth, tenth, and eleventh centuries, and no doubt Christian Sarra belongs principally to this period, though it may have been occupied right down to the Turkish conquest in the early sixteenth century. Perhaps, later on, a closer study of Christian pottery will enable us to date such places more exactly.

J. H. DUNBAR.

BIBLIOGRAPHICAL NOTE.

Annals of Archæol. and Anthropol. Liverpool Univ. Press. Vol. VIII, pp. 97-101, with two plates xxii, xxix. Vol. XIV, pp. 98-101, with four plates lxxvi-lxxix. See also Vol. XIII, pp. 18, 55-56.

Churches in Lower Nubia. By G. S. Mileham. Edited by D. Randall-MacIver. Vol. II of Eckley B. Coxe, Jun. Exped. to Nubia. Univ. of Pennsylvania. 1910. Pp. 40-47, with 8 plates 29-36.

Christian Antiq. in the Nile Valley. By Somers Clarke. Clarendon Press, Oxford. 1912. Pp. 62-66, with 8 drawings.

Ancient Egyptian Masonry. By Somers Clarke and R. Engelbach. Oxford Univ. Press. 1930. Chap. XIX—Brickwork.

Travels in Nubia. By J. L. Burckhardt. John Murray. 1819. Pp. 40, 133.

The Nubian Texts of the Christian Period. By F. L. Griffith. Pub. from Berlin. 1913. Pp. 4, 5.

For an account of Christianity in Nubia, see also *A History of the Arabs in the Sudan.* By H. A. Macmichael. Univ. Press, Camb. 1922. Vol. I, pp. 26, 40, 48, 169, 177, 181-8.

NOTE.—Sarra is variously spelt Sarra, Serra, Serreh, Sarrah, and Serre. (Its Egyptian name was Tehekhti.)

REVIEWS.

History of Palestine and Syria. By A. T. OLMSTEAD. 8vo. 664 pp., 187 figs., 18 maps and plans. 1931. 30s. (Scribner's.)

The history of Palestine is so largely linked with personal feelings that any writer on it is certain to view it from an individual standpoint. There is around us equally forcible belief and disbelief in the value of documents, an immense mass of criticism in every stage, and the whole of it coloured individually. The position of any writer on the subject sets the standard by which his judgment must be appraised. Prof. Olmstead was, naturally, trained in the critical canons of the German school, and thus is committed to various assumptions. But he has the critical insight to assert the contemporary value of the "core" of the books of Samuel, of the detailed history of David's life, the decrees of Darius, the book of Esther, and the additional details of the Chronicles. Thus he carries much weight as having in many cases an independent judgment.

The Assyrian side of the history is, naturally, the most fully treated. Assyrian history is taken as a basis, and the declarations of the prophets are each placed in their historic position, influencing the political relations with foreign powers which threatened Israel. This is a great gain for understanding the religious value of the prophetic writings to the actual life of the people. It places the characters of those troubled times on the true footing that they were "men of like passions with ourselves," and not abstract historical puppets, or emblematic expressions. All the discoveries of Syrian monuments are illustrated and brought in as contemporary records; thus we have for the first time a real history of Jewish times, not only viewed from the didactic standpoint.

On the other hand, the treatment of Egyptian influence on the early history is much less judicious. The Genesis narratives are almost ignored historically. Of Exodus we read "perhaps the Hebrew stories retain faint recollections of the Hyksos Empire." There is no sense of the strong Egypticity of the early narratives, which fit the Egyptian and Hyksos habits and outlook at every turn. The organisation of the Hebrews, the Hebrew officials who ganged the workers, and who must have kept regular lists and accounts, the position under the Egyptians, show that there was a business-like record kept up, which was edited later in Exodus, when the detail was partly forgotten. Yet all this is entirely ignored in this history—the one plate of imitations of Egyptian scarabs is upside down. The intensely personal history of Moses is represented as first appearing in the reign of Asa, and the tribes are taken as being scattered settlers long before any Exodus. Yet the oppression in Egypt is accepted, on the basis of only the 70 men entering Egypt, and these "survivals of the older tradition make it plain that but a single tribe was ever in Goshen." He admits that Moses was the leader of the Exodus, and suggests that only Levi was in Egypt. The other tribes are supposed to have been largely mixed with previous peoples, and to have been settled before the Exodus. A very different view would result from more acquaintance with the Egyptian influences and connections. No mention is made of the excellent studies of the late Harold Wiener, and his

interpretation of the Israel stele as referring to the advance of Israel at the Exodus, and its repulse by Egyptian troops and allies of South Palestine.

The turmoil of the revolt of Syria against Akhenaten is fully traced from the Amarna letters. The position adopted is that the name of Habiru, or Khabiri, was a general appellation of nomad, bandit, or mercenary, and was applied in Canaan to the Israelites, who were hence called Hebrews. Thus the old term is brought in to identify the Habiru of Palestine in the Amarna letters with the Israelite invasion. Now this implies that the Exodus took place early in the reign of Amenhetep III, or even under Tehutmes IV. At that time the powerful condition of Egypt, and the hold on Sinai and Palestine, makes the escape of a tribe of slave workers a very unlikely event. The whole period must be viewed from the Egyptian side, and not only as a Canaanite affair. Moreover, the term Habiru may equally well have been applied to the Israelite invaders after the reign of Ramessu III.

Whatever views may be taken, this book will be essential to students, and therefore it is needful to point out details which might be misleading. On p. 57 Netia, or Nedaā, conquered in the Vth dynasty, is referred to Lud, whereas there were then heavy fortifications defending South Palestine from Egypt. It is more probably the Anitha of Greek times, marking an advance up east of the Dead Sea where the country was less strongly defended.

P. 82. The *ashera* was not a bare pole, but a tree, as shown in the many classical scenes of the tree and pillar (*Anc. Eg.*, 1928, 42), and illustrated by the present adoration of sacred trees in Palestine.

P. 89. Sekmem is certainly Shechem, the dual referring to the two shoulders of Ebal and Gerizim.

P. 95. The Khepesh was not a sceptre, but a weapon. Authority should be quoted for obsidian in Nubia, which is a strange statement.

P. 98. No enamel scarabs are known till Greek times. The early ones were glazed.

P. 120. Tell el Yehudiyeh (which is described but not named) is not in the Wady Tumilat or Goshen, but thirty miles away in the Eastern Delta.

P. 128. There is no ground for assigning Tanis to the Hyksos. The whole place was probably founded by Ramessu II, who brought statues from the cities in the south.

P. 129. For Cumæ read Cusae.

P. 147. Egypt was not the source of glass making; glass was imported occasionally for thousands of years before it was commonly used. Bronze casting hollow, by the wax process, is as early as the IIInd dynasty, and is not a lost art, but is still in use. Linen was in common use from the Ist dynasty, and not merely in the XVIIIth.

P. 238. The text shows that gold was worth only *half* as much as silver.

P. 240. The lotus is not reversed, but correctly in pendant position.

P. 267. The Krethi are not "bracketed with the Philistines," but with the Pelethite Arabs.

P. 316. The comb pick is commonly only a mark of Graeco-Roman work; any earlier example should be verified.

P. 340. Solomon was the brother-in-law, not son-in-law, of Shishak, by the relative dates.

P. 404. Sibu was not a Delta king, but the well-known Shabaka (omitting the article *ka*), who conquered the Delta.

P. 628-9. The proverbs of Amenemapt were probably copied from the

Jewish proverbs, according to the latest view of the date estimated by grammatical detail (*Anc. Eg.*, 1931, 94).

In the titles of the frontispiece and of plans 13 and 14 statements are definitely made which are not warranted by the original publications.

The work as a whole is very welcome, and with some revision of the Egyptian side of the history, in the light of facts and not outside theories of criticism, it would long remain a standard work of reference.

Osiris: A Study in Mysteries and Religion. By HAROLD P. COOK. Svo. 165 pp. 1931. 5s. (Daniel Co.)

This study is devoted to the ideas of Plutarch and his age, in the latest stage of Egyptian religion; as the author says: "the version which Plutarch records was, beyond doubt, the work of the priests or of late, and perhaps Greek, astronomers." Accordingly much of this book is based on the signs of the zodiac which are Babylonian, and were unknown in the Egyptian mythology. The dominant iconography of the heavens to the Egyptians was that of the immense figures of Nekht the strong one and Taurt the great one, each of which spread over half the sphere. To deal with the native astronomy we must attend to them, and not to a zodiac. Many quotations are made from an esoteric American work, Yarker's *Arcane Schools*, which fortunately is not familiar in England, as it is usually incorrect.

The author presses the position of Osiris as a Sun-god, though there is nothing definite for that, except the 365 lights at the procession of Osiris. The Corn-god view is rejected, but the strong evidences of that are (1) the cloth with a figure of Osiris, from which there sprouted ears of corn before burial in the tomb; (2) the figure of Osiris with vegetation sprouting around him; and (3) the modelled figures of Osiris containing grains of corn. As Osiris introduced agriculture, the origin of his worship must go back to the earliest corn-growing, in the Badarian age; the source is strongly indicated as from the Caucasus, by the Book of the Dead and the mythology (*Anc. Eg.*, 1924, 123; 1926, 31).

The main attraction to the author is the nature and meaning of the Mysteries. Other subjects pondered are Serapis, the Josephus version of the account of Joseph and Moses, the five epagomenal days, Eleusinian mysteries, the song Maneros, Dionysios and Osiris, Meroe as the source of civilisation, and the Chronology.

The Life and Times of Marc Antony. By ARTHUR WEIGALL. Svo. 429 pp., 8 pls. 1931. 21s. (T. Butterworth.)

After Mr. Weigall's "Cleopatra" the correlative Antony was almost bound to follow. In this volume the "might have been" imagination is kept in check by the abundance of details, which have been gathered from over a dozen historians, and put into order to form a full narrative. The stage is widely set, covering a century, and displaying the rise of Socialism under the Gracchi to the completion of autocracy by the astute Augustus. All the phases of sentimental humanitarianism, blind experiment, unlooked for cataclysms, reaction, clashing classes, and final rest in the accepted haven of despotism, are what we are familiar with in 1790 or 1848—this is the natural history of democracy. It is here recited in terms which hint at recent experiments nearer home. The great difference between the Roman and the modern life is in the length and violence of the misery. Instead of a Terror of some months in France, Rome had wholesale slaughter by alternate parties going on for fifty years.

All of this recital is built here around the personal interest in a principal actor, Marcus Antonius. We hear almost too much about the brawn and bluster of this splendid animal, and about the contrast of the sallow-faced, pimply Octavian; such labelling is the trick of the "sea-green incorruptible" which bored our grandfathers. All of Antony's jolly good fellowship in drink and squandering, was of no avail against the brain of the sickly Octavian, who always seemed the weaker in command, in popularity, and in chances, but always came out the stronger in results.

What was the net value of Antony in the turmoil of events? Destruction of the wealth of the civilisations which he mastered was his usual result; for construction he had no ability. He could save an immediate crisis by ready wits, but had no vision beyond obvious things at hand. His dream of an Asiatic empire needed much more foresight than lay in his wine-soaked brain. He could not compare at any point with the constructive power of Caesar. This character is true to the descent of his family from Herakles, whose strength was not matched by his brain; see the Aristophanic scene of his being told that he could not be registered as a true Athenian.

Beyond the sheer bloodiness of the age, the worst feature was the prostitution of marriage to gain political values. Great bargains were usually sealed by the parties divorcing their wives and taking the daughters of the opposite sides as political pledges—only to be changed again next time a deal was in hand. Augustus continued the system, and he thus ruined the character of Tiberius, who never cared for life after being torn from his chosen wife to be tied to the depraved Julia.

Altogether, as a picture of the inner forces of a great world crisis seen at close quarters, this work may well stand as a lesson and warning in social politics, and Mr. Weigall is to be congratulated on his rendering such a period in a form which will prove attractive to readers.

JOURNALS.

Palestine Exploration Fund. Quarterly Statement, Jan., 1931.—ROWE, ALAN, and PÈRE VINCENT.—*Restoration of Sanctuaries at Beth Shan.*—This gives restoration of plans of the temple of Tahutmes III, Amenhetep III, Sety I, and Rameses II. The outline plan remained on the same lines down to Sety I, and a considerable change with addition of a large pylon, at right angles to the temple, is due to Rameses II. This is surprising, as it takes the plan with little change from Amenhetep III to Sety I, across the whole wreck and re-conquest of the great revolt. The earlier temple was destroyed, but Sety—true to his policy of exact restoration—rebuilt on the same lines.

April, 1931.—FITZGERALD, G. M.—*Excavations at Beth-shan, 1930.*—The cemetery was cut in very soft limestone, which largely collapsed. One tomb contained "flat-bottomed jars with ledge handles," evidently like those in the earliest cemetery of Tell Ajjūl. Burials of the Iron Age were intruded, in slipper coffins with headpieces. More works on the hill adjoined the previous clearance of the temples. A large lintel of limestone has a figure of Ramessu-user-khepeshe kneeling before cartouches of Rameses III. This official was hitherto considered to have built the temple of Rameses II.; but this could have been the case, as there was not more than 32 years between those kings, so that he might have acted in both buildings.

GARROD, D.—*Excavations at the Mugharet al Wad.*—This cave near Athlit contained, in parts, 9 feet of deposits. The periods distinguished are (1) Bronze Age and later, (2) Mesolithic, (3) Capsian, (4) Middle Aurignacian, (5) Lower Middle Aurignacian, (6) Mousterian. Outside of the cave was a bed of red earth with flint and bone implements, but no pottery, hence called Mesolithic. Under it were three burials, near the bed-rock. Each body lay on a hearth with animal bones, and packed around with stones. By one body a conical hole had been cut in the rock, with a raised band left around it. On this band and near it were several square blocks of limestone, whether fractured or dressed is not stated. A large number of sickle flints and hafts show that agriculture existed, though no pottery. In Europe both arts are considered to have arrived together, and it is suggested that they started in different centres, and only coalesced in the European movement. It must, however, be remembered that in hill sites of Biblical period in Palestine there is no pottery, as the people kept the nomadic use of skin and wooden vessels.

July, 1931.—CROWFOOT, J. W.—*Expedition to Samaria-Sebastiya.*—A portion of the massive city wall of Israelite age was cleared, south of the basilica. This is three courses deep, with two headers between the stretchers. This part is 350 yards from the part previously found. Nothing earlier than Omri has yet been reached.

CROWFOOT, J. W.—*Around the fountain court at Jerash.*—A small temple has been found beneath the cathedral. In a court near the fountain was over a hundredweight of glass, stock-in-trade of a glass factory. There are two mosaic floors, the lower one probably Theodosian, the upper one after Valentinian I. The previous sanctity of the place as a shrine of the Arabian god Dusares is discussed.

TURVILLE PETRE, F.—*Dolmen Necropolis near Kerazeh, Galilee*.—Many dolmens have been cleared and planned. One contained coins from Domitian to Hadrian. A tumulus of small stones covered each. Potsherds were Roman, but all such remains are due to secondary use, and the structures are attributed to Bronze Age.

GRANT, ELIHU.—*Ain Shems, 1931*.—The city was active 2000–1200 B.C., and important 1200–1000, finally ruined in 600 by Babylonians.

MAISLER, B.—*Hebrew Ossuary inscription*, for “Shalamsi, daughter of Shammai.”

Antiquity, December, 1930.

This has an excellent article by M. Schaeffer on the Ras Shamra antiquities, already noticed in *Syria*.

BALL, J.—*The Faiyum Depression*.—This summarises recent views about the great Fayum basin, accepting Miss Caton Thompson's view which ignores the historical evidence. Drs. Sandford and Arkell's work dates the origin of the basin in the Pliocene age, and they conclude that it drained out continuously into the Nile valley. A strange statement is made—“Of the late palaeolithic and neolithic periods no traces were found in the Nile valley”; but at the mouth of the Fayum gorge a large deposit of Mousterian flints was found on the desert edge, and published in *Lahun II*, xxxvii, xxxviii.

Page 483. SAWYER, E. H.—*Babylon of Egypt*.—This gives a plan of the Roman fortress, and a view of the entrance since it has been excavated.

June, 1931.

REISNER, G. A.—*Stone Vessels found in Crete and Babylonia*.—This title omits the main subject, which is the comparison with Egypt. Certain principles are formulated: (1) The whole range of a type in Egypt is to be regarded when making comparative dating elsewhere. (2) There must be identity in form, material, and technique, before making valid equations. (3) Primitive peoples in similar culture, with similar needs and materials, are apt to produce similar objects.

On these principles, and studying closely the details, Dr. Reisner cannot agree to any of the Sumerian stone vessels being identical with the Egyptian. Even the cylinder jars show differences. The qualities of alabaster do not seem to be the same as in Egypt.

[All of these conclusions quite agree with my own examination of the material.—F. P.]

Bulletino dell' Associazione Internazionale per gli Studi Mediterranei. (Villa Celimontana, Roma.)

1931, Feb.—*Scavi della Missione Archeologica Italiana a Tebtunis*.—This gives a brief account of the Fayum work. Previous workers had obtained many papyri, but very scant archaeological results. The present work has gained much information. The plan of the city has been surveyed, the broad via Regia identified, and the houses planned. Finally the pre-Ptolemaic strata have been reached, which it is hoped to work in future. A hundred crocodile mummies were found, which it is expected may contain papyri. A plan and

four photographs illustrate the work. Prof. Hrozny reports the Czechoslovak work at Kultepe, near Caesarea. A large building was cleared, which had been burnt probably in the XIIth century B.C. by the northern peoples who crushed the Hittite Kingdom. In a field east of the tell were found nearly 1,000 tablets in cuneiform, belonging to commerce with Assyria and Mesopotamia.

April-May.—PRZEWORSKI, S.—*Eine neue statuette von Reschef*.—Five figures of Reschef are here published, from Hildesheim, Minet el Beida, Louvre, and two dealers, and several others are listed.

Blackwood's Magazine.

1931, Feb.—JARVIS, C. S.—*The Forty Years' Wanderings*.—This is a discussion of the northern and the southern routes of the Exodus. Major Jarvis, the Governor of Sinai, argues strongly for the northern route, from practical knowledge. He states that the only evidence in favour of southern Sinai is tradition, but omits to explain Elim with 70 palms, or Paran=Feiran, neither of which are to be found on the desolate north coast. Pihahiroth was about the head of the Bitter Lakes, and immediately after that they passed through the sea into the wilderness. None of this seems applicable to the northern route. On the other hand, it is argued that the quails are found on the coast, and tamarisk for manna is common there.

After all, the essential matter is the local description given by the Israelites. What they believed is plain, though in what may be a later summary. In Deut. i., 5, "in the land of Moab began Moses to declare this law," that is unquestionably east of the Dead Sea valley; and in i., 1, "the words which Moses spake unto all Israel on this side Jordan, in the wilderness in the plain over against the Red Sea (yam Suf) between Paran and Tophel and Laban and Hazeroth and Dizahab." Now it is impossible in the east of the Dead Sea to be over against the Mediterranean, but rather against the Gulf of Akaba, which is all one with the Dead Sea valley and the Gulf of Suez. It is unquestionable that the writer of Deuteronomy i. regarded the Yam Suf as being far from the Mediterranean. Nor can the position of the Red Sea be on the Mediterranean, as that is always called the Great Sea (yam ha-gadhol). As in other proposals, we can only say if the Suez-Paran route is not true, then the accounts of travel have been written later to fit that region.

Journal of the Manchester Egyptian and Oriental Society. 1931. 7s. 6d.

HOOKE, S. H.—*Mixture of Cults in Canaan*.—This paper dwells on the change in our ideas about Canaanites. Instead of supposing they were uncouth barbarians we now know that there was considerable civilisation. The writer might have strengthened his view by the Canaanite city unearthed at Gaza, which is as well ordered as a Greek city. We may look on the Israelite invasion much as we should on a Wahaby invasion of western Palestine now. The variety of cults is noted as showing that there was no homogeneous religion, and the pagan Arab customs dwelt on by Robertson Smith may be the relics of a higher culture. Dr. Jirku has lately studied the Pentateuch laws, and perceives ten classes, each of which has a separate introduction, probably the compilation of special codes differing in origin. "These findings throw the general picture of Hebrew religious organisation back into a much earlier stage of settled life in Canaan than the orthodox Wellhausen view of the nomadic origin of Hebrew religion allows."

NOTES AND NEWS.

UNIVERSITY COLLEGE, GOWER STREET.

Thursday, 19th May	..	2.30.
Saturday, 21st May	..	3.0.
Tuesday, 24th May	..	5.30.

The annual lecture on the latest discoveries will be given three times by Sir Flinders Petrie on the above dates. Admission free, *without ticket*. The subject will be the Palaces of Ancient Gaza, illustrated by lantern.

EXHIBITION OF COPPER AGE, CANAANITE, AND HYKSOS ANTIQUITIES.

July 11th—August 6th.

The annual exhibition of antiquities from Tell el Ajjūl, the ancient Gaza, will be open from 10 till 5 daily (except Sundays and Bank Holiday), also on evenings of July 15 and 25, hours 6 till 7.30. Admission free, *without ticket*. Readers are asked to make these lecture and exhibition dates as widely known as possible. No intimation will be sent individually, but they will be announced in the press.

As many donations were delayed, some ceased, and the majority are postponed, there was little of the usual funds forthcoming last autumn, for excavations on the large scale necessitated by this important site. The support from New York University, which had provided one quarter of the expenses the previous year, was also withdrawn. With much regret, therefore, we were obliged to draw out capital for most of the work. This can to some extent be remedied, and enough retained for publication of the results, if any guineas that can be spared are now sent in to the London Office (Lady Petrie, University College, Gower Street, W.C.1, crossed Barclay & Co.).

An additional seven shillings secures this and three following parts of *Ancient Egypt*.

All arrears are urgently solicited, and any donations towards the upkeep of the excavations.

Tell el Ajjūl.

H. PETRIE,
Hon. Organizing Secretary.

MOHENJO-DARO.

THE magnificent work which Sir John Marshall has brought out is essential for any study of the origins of civilisation. The 716 pages and 164 plates give a first survey of the gains, and students of other cultures will have to take into their conception the Indus as equally original with the Nile and the Tigris. To enter on an analysis of the whole work is beyond our scope here, but at least some sense of its relation to the Egyptian methods and ideas must be given. This is the more needful as the high price, £10, will make copies scarce, but we owe our copy at University College to the generosity of our former student Ernest Mackay, who did much of the excavating and has written about a third of the volume.

The chapters deal with the land and climate, the site, the buildings, the portable antiquities, religion, burial, and the extent and age of the civilisation. Then follow accounts of the various buildings and architecture. The pottery, figurines, statuary, stone vessels, and seals each have a chapter. The seals are discussed from the Tigrian point of view. Special chapters are given to the household objects, metalwork, personal ornaments, games, shell and faience, weights, human remains, animals, minerals, and analyses.

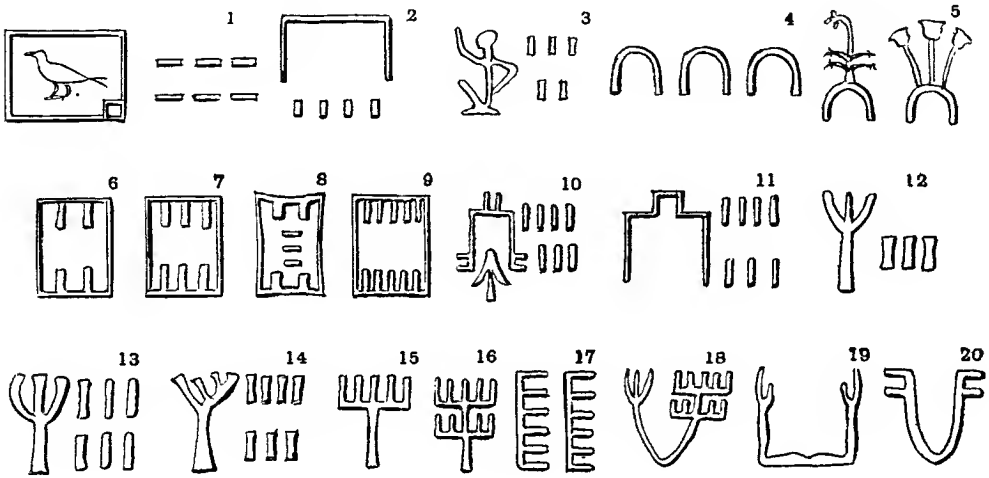
Of all this survey, the most surprising matter is the figure sculpture. The heads of steatite are markedly typical, but the figure of red stone from Harappa is astonishing in the exactness and observation of the muscular curves, and its true proportions. The dancing figures in grey stone and bronze are skilful in the transient pose, though not so perfectly expressed as the red statuette. Of less careful work there is a multitude of small pottery figures of animals, especially squirrel and monkey, and a bull is finely modelled. The faience vases are small, used probably for cosmetics.

The building is all in baked brick, which has retained its condition remarkably. No other country developed thus until Rome produced red bricks three thousand years later. In the painted pottery the designs are all in rectangular order, as in Egypt; no circle is divided into 6 as in Mesopotamia and Syria. A few pieces are in the Susa I style, with hugely horned ibex, and black on white basket patterns. Some rude pottery figures have many necklaces and button knobs freely used, like the XIth dynasty style. The copper axes are like those of the Ist dynasty, flat slabs without any projection to attach the lashing on to the handle. The beads are strung six rows deep, with spaced strips and semi-circular end pieces, exactly in the Egyptian style. Model chariots are found with both smooth and also knobbed wheels. Shell inlay was a favourite decoration, as it was with the Hyksos in Egypt. The profusion of weights shows that balances must have been in common use. The results connected with other systems must be examined at length: most of them agree with the Sumerian standard, also known as the gold weight of Egypt.

The most fascinating subject in this civilisation is the writing. Like most scripts it is based on pictures, and the ideographs are all that we can use to interpret it, in the absence of linguistic material. For this examination the best aid is by the similar method of ideographs in Egypt, as they retained longest

their original detail. In writing on clay, or reed, or wood, the difficulty of handling quickly leads to formations that conceal the original shape. The Indus script, being engraved on stone, escapes transformation, much as the Egyptian stone writing escaped; and the method of writing successive titles together seems to make Egypt a training ground. Over 1800 titles were lately classified, and delimited by their contacts, in *Ancient Egypt*, 1924, IV, to 1926, III. This Egyptian series is enlightening in its nature and methods, which supply parallels to what may be discerned on the Indus. In the following suggestions it would be merely distracting to assess in every case their uncertainty. Once for all let it be said, these are only suggestions, or speculations, and for "is," read "may possibly be," in all instances.

The first obvious feature is the recurrence of numbers of strokes, and the examples of these are placed in the forefront of all, in the "Sign Manual" of the publication. In Egypt there was (Fig. 1) "the great house of six lords,"



- (2) "the house of four," (3) "the five men," (4) "the council of thirty chiefs,"
 (5) the sectional councils of ten of the south and ten of the north.

So on the Indus there was (6) a hall of four, (7) hall of six, (8) hall of seven, in a special form, or (10, 11) normal forms (9) hall of ten; no other numerals accompany this sign of a hall.

The system of naming offices by the number of officials is also familiar in Italy, as duumviri, triumviri, quatuorviri, septemviri, decemviri, and quindecimviri. In Cappadocia also the cuneiform tablets name boards of five officials, or of ten officials, as Mr. Sidney Smith informs me. This official habit is therefore very widely spread.

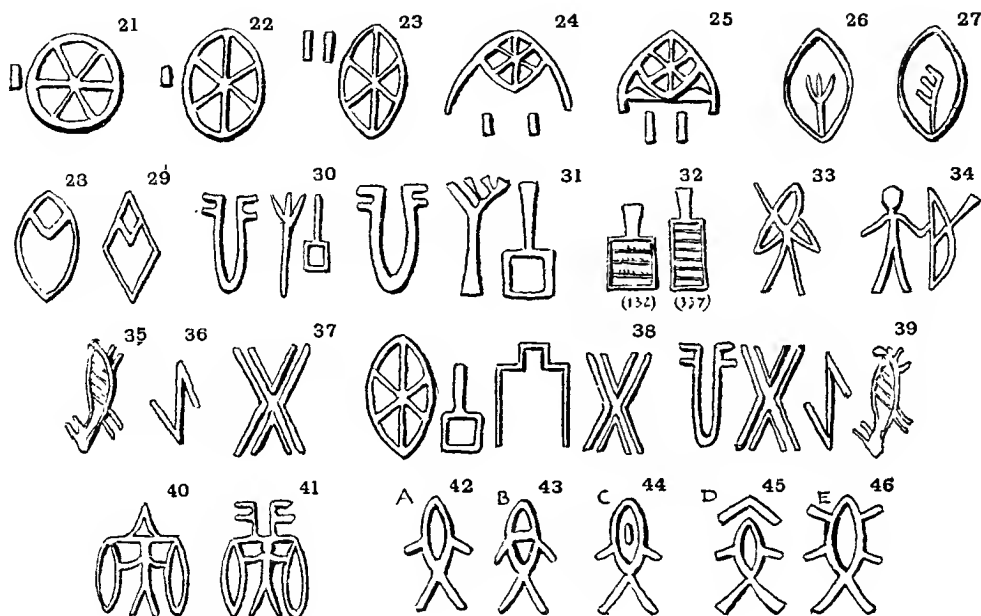
Where numbers are found with only one sign (as 12, 13, 14) they must be referred to a general board over a whole subject. Sometimes a number is set on a standard (15) of 4, 5, 6, 7, 8 or 10 officials (16). This seems to be the mark of a judge on circuit or travelling inspector, who set up the ensign of his office outside the court where acting. Probably this is the origin of the more compact sign (17) of 4, 5, 6, 7, 8 or 12 lines. The numbers are mostly those of courts already noted above.

Another form of this is a pair of arms (18) bearing strokes on a stand held on one arm; this is like the Egyptian *ka* (19) which indicates the active energy of the person. So here the arms (18) refer to action for the court of 10. This

symbol is seen also in the very common sign 20, at the end of a title, pointing to action for the office concerned ; this is best rendered here as *wakil* or agent.

A very frequent sign is the wheel with six spokes. Confirming the sense of this as a wheeled vehicle, it is copied from a brand-mark on the neck of a bullock (seal 91), obviously a draught-ox. There are two kinds of wheeled conveyance, those with one stroke (21, 22) and with two strokes (23), referring to chariots and to wagons. Further, there is (24, 25) the wagon with a tilt over it. The frequency of wheel signs shows how common the bullock cart and wagon were anciently, as now, in India. There is another variety, 26 and 27, to denote a solid wheel of wood.

The signs 12, 13, 14 are obviously a tree lopped of its branches ; from the frequency of these they refer to timber in general, and to two kinds endogenous,



or coniferous (12), and exogenous, or branching (14). The numbers with these in 12-14 would refer to different offices or courts, or perhaps different forests. Another kind of wheel (28, 29) may perhaps be interpreted by some construction still in use ; it is formalised for ease of engraving, and all signs are narrowed in order to pack closer on the seal.

The commonest group with the timber sign is 30 or 31. The square object is sometimes lined across, as in 32 ; this can hardly be other than a writing tablet with a handle, like some hornbooks. The group then read as "wakil of the registrar of timber" or forests.

The army is represented by infantry (33) and archery (34).

A dead animal, kid or lamb, is often figured hung up by the heels (35), meaning game or hunting. After it is usually sign 36, apparently not a weapon but a trap. Often 37 follows, but 36 is always with the animal, and not always with 37, so it must refer to the animal. No. 37 seems to be an official title, as in 38, "official of the registry of chariots," where it cannot be an object. Also 39, "wakil of the official trapper." No. 40 is a man bearing waterskins on a yoke, sometimes with branches over them to shade them (41) : the sense is "water supply."

We may now try to use the frequency of grouping as an indication. There are five very common signs much alike, 42 to 46, lettered here A, B, C, D, E. Of those, A, B or C are rarely placed together, and (as the differences are but slight) they represent small differences of function, seal 156. This sign A may occur alone with a numeral, it is therefore of higher rank than the signs otherwise qualified. It may well be taken as inspector or intendant. There are two other grades of inspector, D and E, which may occur together, or with the inspector sign. They may be D, assistant or sub-inspector (under control), and E, deputy (with full action). Thus the combined signs will make sense as AD, assistant inspector; AE, deputy inspector; DE, assistant deputy inspector. This at least suggests how such combinations of signs might occur.

Having gone so far, we may now review the remainder of the signs, of which there are five or more examples, for it is only by reviewing many instances of one sign that we may hope to find combinations which give a clue to the meaning.

The sign 47, of curved lines barred across, is joined to the man with water-skins (40, 41), pointing to water as the connection, and we take this as a canal with ripples on it. 48 seems plainly to be a bow, with a holder to prevent the bow-string cutting the hand. 49 is joined in 50 with the "registrar of wood." May it be the staff and wallet of a forester? 51 has the curious theta-like sign with the water supply, an official of water service: and the same in 52 is associated with the canal sign (47), branching. In 53 we may have a fork of a canal; with it is a similar sign (54), not barred, which may be a road, the seal belonging to a surveyor of roads and canals. 55 has a loop sign to begin, connected with trees, and the theta sign with the same bifurcate sign which accompanied it as indicating an official of water, showing a surveyor of wood and water. 56 is a row of hills, turned up for compactness of writing. In 57 a hilly land is shown, also turned up. 58 is mountainous land, and in 59 the last triangle is barred, indicating rocky stages. This sign in 60 has a sign on it, like the Egyptian sky sign, so this may refer to a very high mountain touching the sky. 61 is a very usual terminal sign: it may stand alone, so it refers to a person and not a thing. It is so common that it is a generic title, and not specific. It is usually associated with an inspectorate, but never has a wakil, so it is not for action, but for information and direction. It is associated with most of the courts, of 4, 5, 6, 7, and 12, so it is not of any one department. This seems as if it were a territorial dignity, a feudal chief who inspects for the State, but has no specific action. Probably a feudal knight is the nearest equivalent; if so, the addition of it to other definite functions would be parallel to the title of Sir. It has been proposed that this is a spear, and that would fit with a knight as the title.

62 seems obviously a table, though folding stands of tables are not figured in India; the crab sign after it would then refer to commissariat. It occurs in 63 with a rectangular sign, which seems from this to refer to food. 64 is a wakil of animals, timber, and trees, forest products.

Thus out of some 56 signs which recur five times we have dealt with 41, of which a few are only general official designations.

We may now attempt to see what proportion of the whole can be read by the basis of sign-values which we have reached so far, with the number of the seal.

- 5 Wakil of roads.
- 10 Wakil of the wagon of official of the court of five for infantry.
- 12 Wakil of the official trapper. Wakil of the heavy wagon (solid wheel).
- 13 Same.
- 14 Wakil of the two wagons of the deputy inspector of the court of seven.

- 15 Office of archers (bundle of arrows).
 19 Wagon of the inspector of four, knight.
 21 Wakil of bows. Wakil of inspector of trapped game.
 24 Wakil of bows. Wakil of assistant inspector of infantry.
 25 Timber of the court of seven.
 29 Wakil of bows, forester of the court of three.
 34 Wakil of the court of seven.
 35 Commissary of wagons for timber of the court of six.



- 40 Wakil of the assistant inspector of registering timber.
 41 Wakil of bows, inspector of the court of three, knight.
 43 Official of canal and water supply.
 44 Wakil of sub-inspector of commissariat.
 45 Wagon of water supply.
 53 Deputy inspector of the wakil of the table (commissariat).
 57 Wagon of sub-inspector of wakil of the commissariat.
 58 Wakil of the officials of timber and water supply.
 69 Archer and forester.
 70 Third wakil of archers of the court of five.
 74 Wakil of the wagon for bows of the court of seven.

- 75 Inspector of the orchard food (fruit).
- 76 Wagon of the forestry board of four.
- 79 Wagon of second deputy inspector of court of twelve of water supply.
- 82 Wakil of wagon of second inspector of roads.
- 87 Board of four for wood of archery ; sub-deputy inspector ; wakil of sub-inspector of the official trapper.
- 88 Wagon and heavy wagon of deputy inspector, knight.
- 92 Wakil of wood for archery ; wakil of the office of five for bows.
- 93 Wakil of duck ponds.
- 96 Wagon of deputy inspector of commissariat.
- 97 Wakil of wagons of deputy inspector of the board of ten.
- 100 Wakil of official hunter.

Thus out of the first hundred there are 35 which read now with official titles, and these seem reasonable and fitted to the conditions.

The first consideration is the pictorial image, if that can be understood. After that, some result can be reached by statistic of repetitions of the commonest signs. Then the stage is reached of searching for some ideograph linked with a sign, indicating its purpose. Every instance is to be read through, to see if a supposed meaning will be applicable.

It may seem strange that, so far, no personal names appear to be indicated, but this is what we find in Egypt. The greater part of the seals of the early dynasties were purely official, and had no personal reference. During the Vth dynasty, probably, offices had become hereditary, and too much in personal holding for, in the VIth, Pepy I had a series of large official cylinder seals made for public use, not one of which has any name except that of the king.

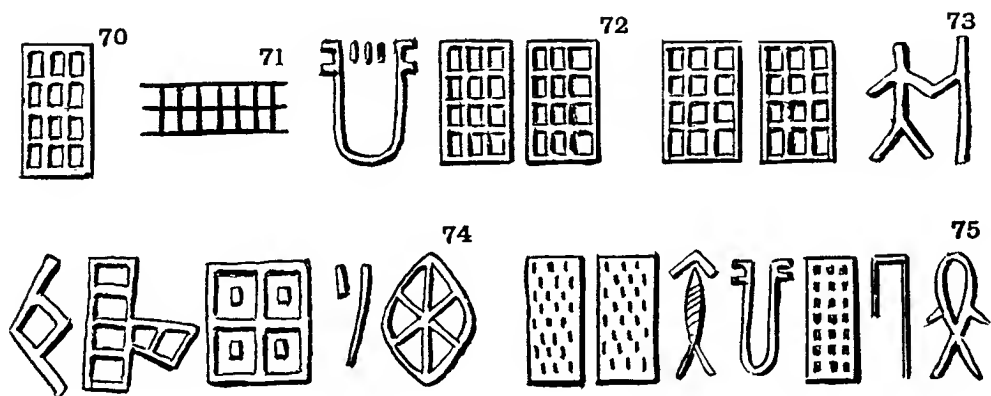
Some likely subjects have been looked for, but there is nothing so far to suggest weaving, building, or fire-drill. The Egyptian sealings likewise have no mention of such arts, because they did not enter in the class of official stores, for which the seals were intended. Here the wagon is prominent, probably because the seals were largely for transported goods, to show the destination of timber and military stores.

For further advance in reading, a practical knowledge of the country and of native Indian administration is necessary, to guide the insight on the meaning of signs. Analysis of the grouping of signs will carry us on general lines, as we can now break up the groups of titles, which were held simultaneously as in Egyptian bureaucracy.

There is one sign (65-67) which I hesitate to add to the readings above, because the parallel is so far-fetched that it would seem fantastic. It obviously appears to represent a cauldron and flesh hook in 65, or a spoon in 66, 67. This is reinforced in the group 68, where it is followed by the commissariat and food signs, and in 69 preceded by the commissariat sign. If we seek for a parallel, Joyce, in his *Social History of Ireland*, states that there were 313 public hostels in Ireland for free hospitality to travellers, and each great man was bound to keep open house in these, and had a large tract of land to pay the expenses of it, for the cauldron should never be taken off the fire. Every cauldron had a flesh fork for taking out pieces of meat ; and an offering to the king of Leinster in 598 A.D. was a flesh fork, a cauldron, a shield, and a sword, so important were the duties of public hospitality. This case and the parallels with Egypt are only quoted as showing what is naturally evolved by similar conditions, but not as implying any direct connections. The importance of the public host will accord with the titles in Fig. 69, ending with the territorial rank of knight. If

this parallel custom be, then, accepted, it would add this duty of hospitality to some seventy-five of the seals, so that it must have been one of the most general offices of seal-bearers. Why the sign is often followed by three strokes is not obvious. There may have been various grades of hostels, only the largest taking in man, beast, and wagon. Third grade was usual, but first, second, and fourth grades of service were known. The Khan and rest-house system seem, then, fully developed by 3,000 B.C. in the valley of the Indus.

Another sign which might be guessed is Fig. 70; it may represent plots of irrigated land, like the Egyptian sign for cultivated land, Fig. 71. The examples that help us are Fig. 72, "wakil of irrigated land"; Fig. 73, "measurer of irrigated land," with a measuring rod. In further connection is Fig. 74, "chariot of inspector of irrigation canals." This leads to explaining the second sign from the right in 75, the three sides of a rectangular figure, as "planning" or laying out, so 75 reads "wakil of inspector laying out irrigated land, sub-inspector of irrigated lands." The stroke and tick which come second from right end of 74 seem to imply an individual person rather than an office, *e.g.*, commissary, not commissariat.



We may now endeavour to read some more sealings.

- 18 Registrar of infantry hostel of the fourth (highest) grade.
- 23 Inspector of wagons of commissariat, wakil of official of canals.
- 30 Knight; over hostel of third grade and waterworks.
- 35 Commissariat wagons of the court of four for timber.
- 38 Court of six for infantry hostel.
- 42 Wakil of hostel for men, second grade, inspector of woods and canals.
- 46 Musician, knight of the court of five.
- 49 Deputy inspector of registry of mountain wagons, wakil of the wagon of the controller of game.
- 61 Chariot of the hostel of timber, or forestry.
- 91 Wagons of the timber of the court of three.
- 94 Wagons of inspector of the court of five, hostel of third grade, knight.

These examples would raise the suggested readings to nearly half of the total number of our hundred here examined.

From the examples now given, it appears that these are certainly ideographic signs, such as lie at the foundation of Egyptian, Sumerian, and Chinese writing; but at so early a stage that the forms can mostly be recognised. The importance of timber and forestry, of canals, of water supply, of transport wagons, and the

hostels needed for trade and government service, all belong to conditions of life which are naturally the same in all ages of India. They open to our view an active world corresponding to the high development of civic life, known by the excellent building and arrangements that are found. These titles, then, help to consolidate the picture of an advanced civilisation now being so fully disclosed by recent research, although not one word of speech is as yet known.

FLINDERS PETRIE.

ANCIENT GAZA.

(Continued from page 9.)

BESIDE the most important of the discoveries, described in the last number, there are various other matters to be noted, which add to the interest of this remarkable site.

In clearing down to the north of the first palace, we uncovered a part of the original revetment which faced over the earth bank of the city of that age (Fig. 1). It is built up of rough blocks of sandstone, and has along the base a gangway about two feet wide paved with stones. The level of this gangway is 1,000 inches above sea. Below these stones there is little more than a foot of loose earth before reaching the marl of the hill at 972 level. The gangway passed about eight feet behind the palace.

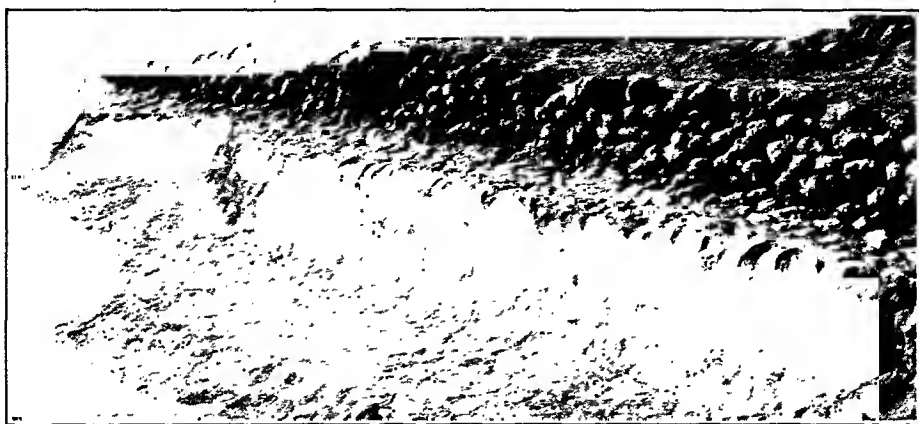


FIG. 1.

The revetment held up a bank of sandstone grit, piled as a defensive bank around the city, and crowned on the top with a mud-brick wall. Though that wall has been entirely denuded away, and gone into air, yet its presence is proved by a thick bed of mud washed down over the slope. At about 60 feet south of the revetment we sank a pit to test the ground, and found no building but only piled sandstone grit, with a bed of black mud in it, sloping down from 1,087 to 970 level, and probably further, at 27°. That it was washed-down mud, and not thrown rubbish, was shown by the thin streaks of black and white in it, evidently due to single storms. We must, then, visualise the first palace wrecked and burnt, then lying for centuries open to the weather, while general denudation piled up two or three feet of earth over the ruins of the palace, and storms washed away the fortress wall as a bed of mud sloping down to the palace. Not till the XIIth dynasty did any man care to use the site again.

The plan of the principal palace levels superposed (Fig. 2) shows how each successive builder laid out his walls without any attempt to base them on earlier walls. The first palace was the largest, forming two, or possibly three sides of a great courtyard of which we do not yet know the extent. The building was at least 150 feet wide. The outer walls were six feet thick; the sandstone slabs on edge which bordered the wall (see p. 2) were sunk about a foot into the marl ground, and stood up as a wainscot around the building. The date is probably that of the Syrian invasion, which expelled the old Copper Age culture, and founded the VII-VIIIth dynasties of Egypt, 3100 B.C.

This palace was burnt and ruined. In the courtyard lay five inches of white ashes, over that there was washed down three feet of earth, and at last

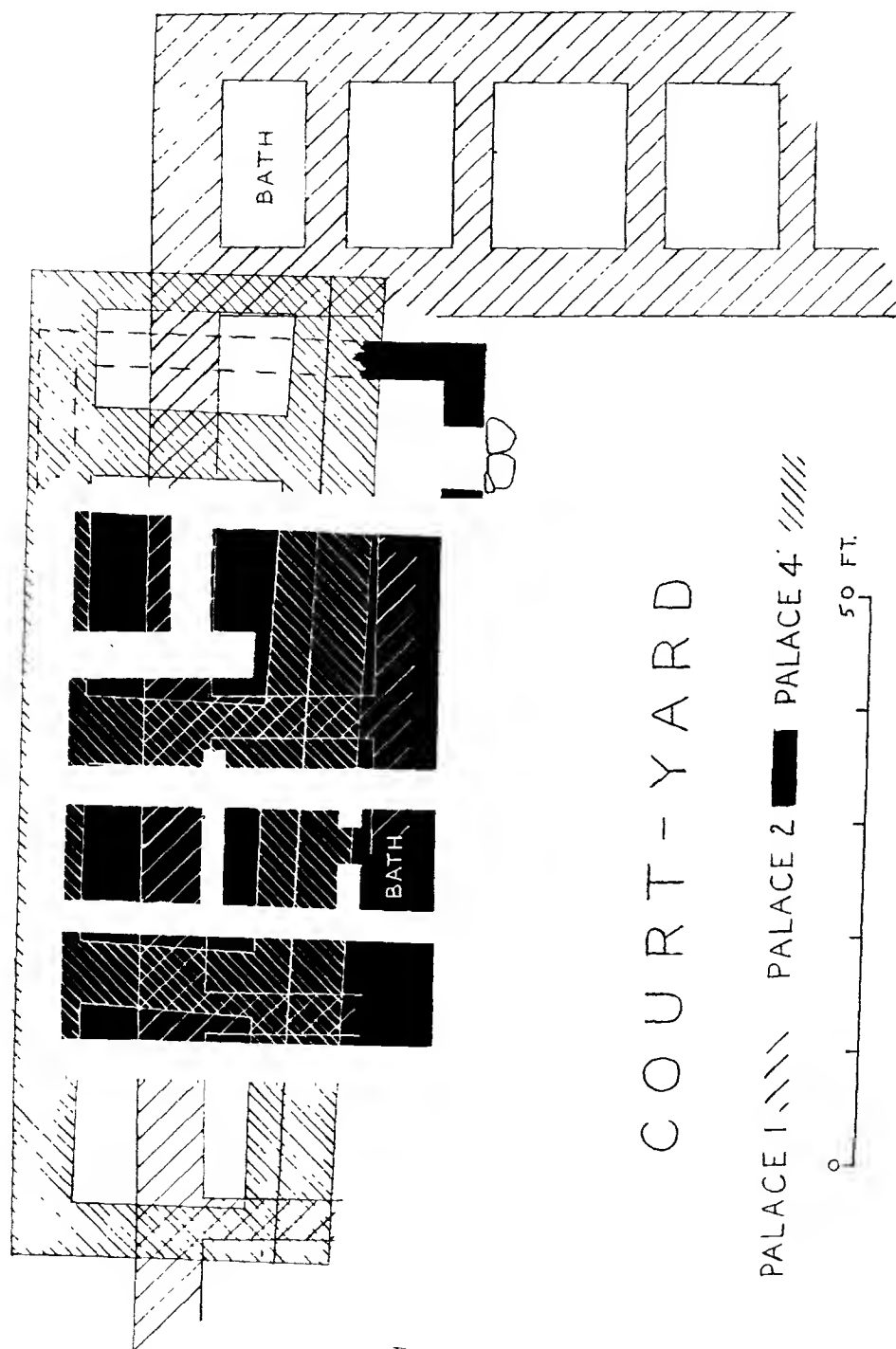


FIG. 2.

on that was founded the second palace. The walls were only half as thick as the earlier building, but beautifully laid with hard yellow clay bricks. This was probably of the XIIth dynasty, 2500 B.C. When the Hyksos arrived at 2375 B.C. they did not feel secure in so slight a building, so they pulled down the three-foot

walls, and laid walls five to eight feet thick—the closely shaded block in the plan. In these they re-used all the older yellow bricks along with dark bricks of their own. Then, about 2100 B.C., the XVIth dynasty Hyksos pulled this about, and raised the floors five feet, shifting and rebuilding the inner walls as here drawn, and having a less robust wall along the front. This was the occasion of the foundation sacrifice, when a horse was killed and thrown into a pit, after



FIG. 3.

removing the shoulders to be eaten, while two other horses were eaten and the bones left scattered singly on the ground. Lastly, in the XVIIIth dynasty, the dis-used palace was found, and built over at a higher level. Only a few rooms remain of this, owing to denudation of the surface. The date is indicated by a jar stamped with the names of Hatshepsut and Tahutmes III, marking the coregency in 1502 B.C. Since that, no builders coveted the site amid the malaria, and only some Arab squatters ever dwelt there.

The bathroom of the first palace is 12 feet 9 by 7 feet 9, paved with hard white plaster (Fig. 3); the floor slopes down to an outer corner for draining, and at one end is a cess pit. In the view, at the right hand, are the white steps going up to the room, and a great jar half sunk in the ground, to supply water. Probably about a quart at a time was baled out, and poured over the body with rubbing. Certainly no immersion bath was used here, nor in the XIIth dynasty. This jar (3100 B.C.) is the earliest of the great jars which were usual about 2400 to 1500 B.C., at Byblos and at Gaza; it proves that the form was not due to the Hyksos. Continuing to the left of the jar is the stone basement of the bathroom wall; abutting on it is the cess pit.

The changes in the style of the daggers is seen in Fig. 4. At the right is one of the flat copper daggers, with only a slight swell up to the axis. Next is a more advanced type with a definite mid-rib, and concave blade on either side of the rib. The butt of it has advanced from the row of rivets along each side, to the definite tang with rivets. All the copper daggers belong to about 3500

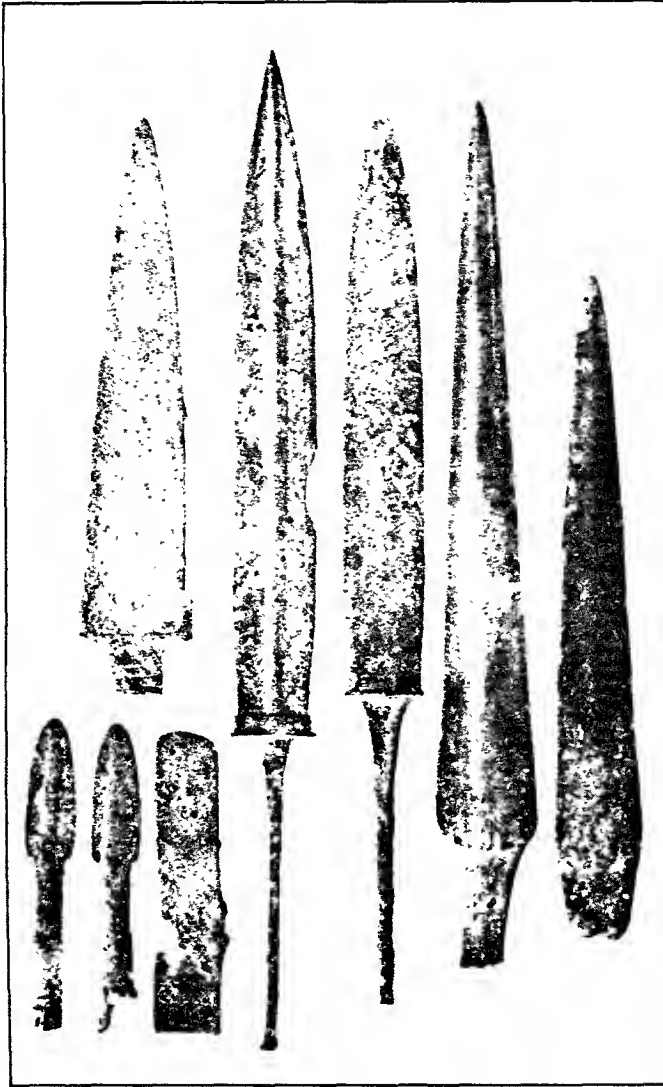


FIG. 4.

to 3100 B.C. At the left hand is a triangular dagger of bronze with fine raised veins on it, both along the axis and two on either side of that. This was with the two spear-heads and axe of Mesopotamian type below. These are probably of late Hyksos age, perhaps 1800 B.C. The two daggers with long tangs, in the middle, are of the XVIIth-XVIIIth on the right, and XVIIIth on the left. That these are daggers, and not spear-heads, is shown by the rivetting over of the end of the tangs.

In the last number, the minor goldwork of the great deposit was illustrated (Fig. 6). Here in Fig. 5 are the ten gold armlets, found with the earrings. They were made to form two groups of five, for the two arms, and each group is

numbered from 1 to 5 by small cuts near one end. The upper and lower armlets of each group are rounded on the terminal sides, and flatted on the inner sides, like the three medial armlets. This flattening was made in order to let them lie better together, and is not due to wear, as the weights of the terminals average

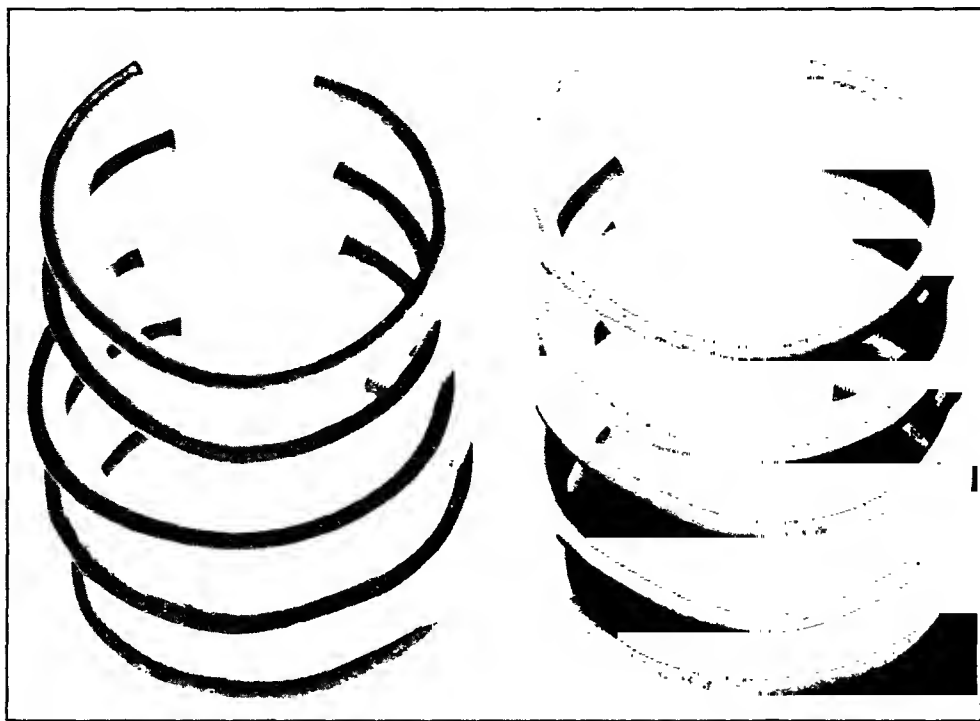


FIG. 5.



FIG. 6.

the same as the medials. The standard is the Egyptian half deben, of the Heliopolitan variety. There is a small group of incised rings around each end of the rod of gold, with slight leafage incisions just below.

This year we have found another specimen of the granular gold work (Fig. 6), of the same type of flying falcon as one which was found last year. In the present example the tail is more developed, but the back is a plain plate instead of duplicating the front. The source of such work is yet quite unknown; the zigzag pattern on a cylinder in Egypt (see *Decor. Pat.* U, VI, 4) suggests Mykenaeen

design, but there is no granular work in the West until the Oriental Etruscans arrived many centuries later.

A large quantity of pottery was found, some of the Copper Age, and also much of it under the Hyksos domination, but mostly of the XVIIIth dynasty

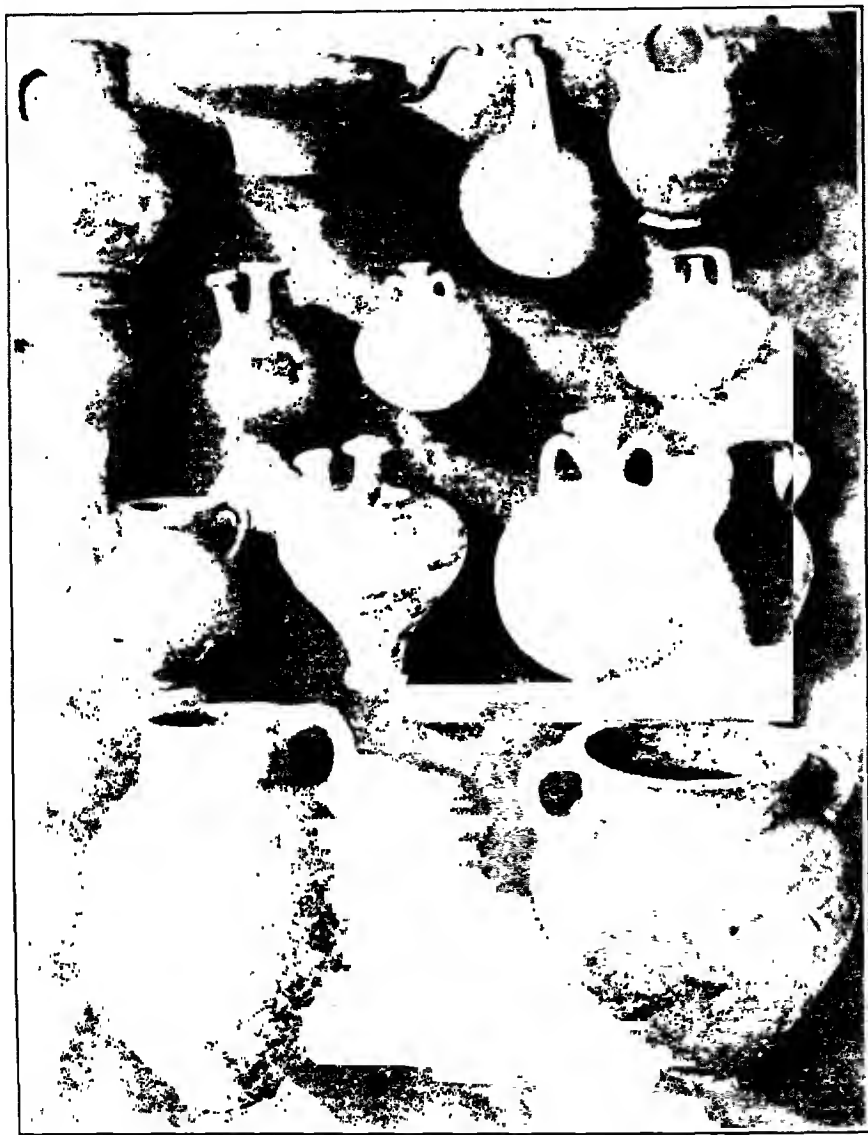


FIG. 7.

in the cemetery. Examples of these are in Fig. 7. The ogee bowl is a late form of the fork-handle type of Cyprus. The spouted vase at the end has a bull's-head mouth. In the second line are three of the Aegean type, as well as a large ogee form of false-neck below.

The prize lying before us in the Tell is the finding of the temples of all these periods. We await donations for this, as the usual support has not come in. These temples are probably not far from the palaces. There we may hope for steles and inscriptions to define exactly the age of the successive levels of building, and there also may be important sculptures and offerings.

FLINDERS PETRIE.

BLUE AND GREEN IN ANCIENT EGYPT.

IN the Near East to-day blue is pre eminently the colour for luck, and blue beads are almost universally hung on the helpless ones of humanity, the babies, and the draught animals—ass or horse; in Egypt a single blue bead is often suspended on a child's forehead from a lock of its hair, as a defence against the Evil Eye, to the attacks of which children are supposed to be specially exposed. Throughout the ages blue is the favoured colour for beads and amulets, in Egypt as in Babylonia and, highly as its prophylactic virtues are still rated, they must have been much more so in the remote times when such beliefs were in their first youth and strength.

This faith in blue is traceable to the earliest prehistoric age of Egypt, the Badarian, when beads are found of turquoise or of steatite glazed in turquoise colour, and so cleverly made that their discoverer, Mr. Guy Brunton, found it often impossible to distinguish, in the field, between the true turquoise and the steatite imitation. Quartz beads were also worn, and must have been greatly valued, considering the tedious difficulty of making them; these two were frequently glazed in the same way, and we may fairly conclude that the origin of the reputation attached to blue is to be found in turquoise.

We are at once reminded that this was the stone precious to the goddess Hathor, who was the Egyptian avatar of the great Mother-goddess, source of fertility and protectress of the dead, and in the late predynastic and early dynastic ages was the paramount deity of the land,¹ the "Queen of the Gods," "Mistress of all," and the prototype of all the city-goddesses who were, in fact, constantly identified with her.² The chosen colour of so great and universal a deity must naturally have had a high value for her worshippers who, by donning it, thought to place themselves safely under her mighty protection.

But why did Hathor thus favour the turquoise blue? As among her many epithets one is "Queen of Heaven," it is a natural inference that her choice was founded on the colour of the sky; her Babylonian counterpart, equally supreme among gods and endowed with as many forms and names, also became Queen of Heaven and, as the astral element was predominant in the religion of Babylon—in cuneiform writing the determinative for "god" was derived from the picture of a star—the predilection for blue is accounted for by Assyriologists as mentioned above. But in the account of Hathor given in my article (*J.E.A.*, vol. xv, pp. 38-40) reasons are given for concluding that she was originally a mother-goddess who became identified with the cow, like her early Babylonian counterpart, that she was adopted by the conquering Falcon Tribe of predynastic Egypt as their great deity and, later, when the solar religion became the official one of the country, she was absorbed into it in various ways and became, very suitably, the "Queen of Heaven." Mr. Sidney Smith, to whom once again I am indebted for explanations of various Assyriological points, believes that ancient Egyptian religion had in reality far more of an astral character than is generally supposed, and is inclined to the opinion that the epithet "Queen of Heaven" may be very primitive in Egypt and Babylonia alike. Yet even if we grant this view with regard to the general character of Egyptian religion, it still seems fairly certain that the heavenly status of Hathor was far from being her earliest one, and that she did not attain it till centuries after the Badarian age, in which

turquoises first appear in Egypt ; another kind of connection must therefore be sought between her and them, suitable to her original status as goddess of fertility.

It will be useful to begin with a brief review of the circumstances of the turquoise industry in ancient Egypt. It was imported there from Sinai, where Hathor reigned as supreme diety : we may ask ourselves if the Egyptians, discovering the deposits, brought their own chief goddess to the site, making her its patron, or were there already " sand-dwellers " frequenting the spot and bringing turquoises to Egypt as their successors brought stibium and other precious things to the monarchs of the XIIth dynasty ?³ The latter solution is far the more probable, for turquoise came to Egypt many centuries before the first record of Egyptian working in Sinai, in the Ist dynasty, under King Semerkhet,⁴ and it would seem from the warlike monument which he left there that the Egyptians were frequently assaulted by the " sand-dwellers," incensed perhaps at the foreigners' incursion on their monopoly. The cult of the mother-goddess was very widely spread, and was strong in ancient Palestine as in Babylonia, and it is most probable that her aegis extended over the Turquoise district as it did everywhere around ; she would have a local form to which the Egyptians applied most naturally the name and attributes of their own form, Hathor, acclaiming her as " Mistress of Sinai." The Egyptian name for the mineral and the district is the same, *Mefkât*, the two being distinguished in writing by their determinatives ; as a name, therefore, the term Turquoise-district is preferable, in dealing with ancient Egypt, to the usual one of " Sinai."

At this point we meet with another consideration of the first importance in the fact that the word *mefkât* has the meaning of malachite, a half-precious stone of green colour, composed of carbonate of copper, and that it was confused with turquoise, a confusion comprehensible to anyone who has seen large quantities of Sinaitic turquoises, for they are mostly of a greenish hue, very inferior to fine specimens from Persia. Perhaps there was little distinction made between them as regards colour, for the primitive agricultural man has often singularly small powers to distinguish tints ; this is the case with the peasant in modern Egypt, whereas the boatman, having to find his way through the shifting sandbanks of the Nile, has a keen eye for colour, since he depends on it to judge of the set of the current and the depth of water for his navigation. We may note too that the Chinese, with all their ancient civilisation, have only one word for " blue " and " green," *ch'ing*.

Green was the colour primarily connected everywhere with fertility and thus with the mother-goddess. For early man, fertility was the most precious quality, first for the hunters, that by multiplying in numbers they might find strength to sustain a precarious livelihood, and next for tillers of the soil, for the multiplication of their crops. This conception has always been largely centred on trees, the constant emblems of all that is alive and flourishing ; everywhere they symbolise fertility and strong life, including the lasting life in the After-world so much desired by ancient Egyptians and Babylonians, as by many another race ; they are accordingly planted by such peoples in their burial-grounds, evergreen kinds being naturally preferred.⁵

In the early Indian culture recently discovered in the old valley of the Indus, the connection between trees and mother-goddess is emphatically shown in a seal displaying a tree growing from her womb.⁶ In recent times the Indian tree-goddesses have been relegated by later religious systems to a lower rank in the spirit-world, becoming the Yakshis whose grace and charm, as they smile down from their trees in old sculptures, have beguiled many an amateur into

the forests of early Indian art. In ancient Egypt the connection is very plain on several monuments; one of the most appealing pictures that has come down to us is that of the goddess, embowered in her tree, slim and graceful in the nakedness that marks her kind, pouring down the waters of refreshment to the lately-departed soul who stands, all athirst, beneath the boughs, often in the guise of a human-headed bird.⁷ In some of these scenes the goddess bears no name, in others that of Hathor or Nût, the latter being an example of the usurpation by a deity of a later religious system—this time the Solar—of the attributes of an earlier one, best exemplified by Isis, the chief goddess of the Osirian Cycle, who took over the very form of Hathor, the Divine Queen of an earlier dispensation. The chosen tree was the sycomore, so grateful for its shade and fruit in an almost rainless country where trees are naturally rare. In some passages the sacred trees are said to be of *mefkât*, which has been translated as “turquoise,”⁸ but it is surely preferable to adopt the primary meaning “malachite,” which denoted the fresh greenness of the immortal’s tree. In Egypt, as throughout the East, there are still many sacred trees, attached to the burial-places of holy men,⁹ who have taken the place, in the popular estimation, of the ancient local deities. A very interesting link between the *auliya* and the primitive tree-goddesses is found in Palestine where Prof. Canaan, pursuing his studies of Mohammedan saints and sanctuaries, has found that a considerable proportion of the former are women, that the proportion of women enjoying a more than local reputation is double that of men, and that in many places where there are saints of both sexes the woman enjoys the greater popularity.¹⁰ Further, “practically all trees that have as their own name the single name of a tree are thought to be inhabited by female saints . . . who appear on different occasions to different people.” They possess the powers of the holy men, “heal the sick, help the oppressed, guard the property of their neighbours, protect the village from enemies.” It is to be noted that while the *auliya* are nearly all venerable old men with long white beards, the *weliyât*, who often appear in night visions, are usually young maidens—an idea inherited, we may presume, from the youthful grace of the goddess in her tree.¹¹

In modern Egypt the green of plants and flowers still symbolises life as opposed to total extinction in the grave; in some districts the whitewashed graves are decked with painted flowers and vines that the dead man may be refreshed by their sight, as a simple working-man once told me, not without rebuke from an *effendi* bystander, sophisticated with modern education and versed in the eschatology of Islam. Again, a young and intelligent artisan, recounting to me the ceremony, just completed, of the Fortieth Day after his father’s death, added that he was happy in the assurance of his father’s contentment at all that he had done, for him as well as for the family, for the dead man had appeared to him in a vision, “sitting in a green place and content.” Thus the tangible Egyptian paradise, ancient or modern alike, so well expressed in Marvell’s line “a green thought in a green place,” is, in their minds, the same for the dead as for the living. The ancient word for “green,” *wâz*, means also “fresh” as applied to living things and so, figuratively, “alive” and “flourishing”; similarly *mefkât* is connected with ideas of god and heaven, and sometimes signifies even “joy.”¹² The connection between “green” and “prosperity” or “life” is clear in several passages of the *Pyramid Texts*, as in pars. 125, 163, 509, 701 and, especially, 567, which is obscure in parts but contains an illustrative invocation to Nût to “sow; make green . . . (as) thou art green, the king is green, (like) the green plant of the living.” It was doubtless this

sense of livingness in green that caused the Egyptians to represent Osiris as green-faced, as a sign of his yearly resurrection to life from death, to prove himself anew the lord of fertility and the waters that bring it. In early times, at least, they daubed their own faces with green,* as proved by the malachite found on the slate palettes and, in their writings, by such passages as par. 54 of the *Pyramid Texts*:—"Recitation: O Osiris N., paint thyself with this wholesome offering (literally Horus-eye)—two bags of green paint"; we may infer from the large votive palettes, carved with historical scenes and religious symbols, that the gods, in their images, underwent the same treatment in the course of their daily toilet in their shrines.¹³

Beads and amulets, of frit or steatite, were often covered with green glaze, from very early times, oftener in fact than with blue, partly perhaps because it was an easier colour to produce, not needing the purity of material essential for a pure blue; though that would tend to enhance the value of blue, it is not to be doubted that the green glaze was credited with great virtues of its own.

How then did blue, instead of green, attain so wide and lasting a reputation for its virtues? An answer presents itself in the industrial properties of malachite, a copper carbonate which produces through fire the bright blue glaze so valued for all things amuletic; this blue would be counted as the very essence of the precious green malachite, and its virtue rated higher by reason of its concentration. An analogous case is that of incense which, being the perfumed essence of a special tree, emblem of fertility and life, was deemed as such to be richly endowed with life-giving powers.¹⁴ Two thousand years ago the harvesting of the precious gum in South Arabia, Hadramout, was conducted on ritual lines, with strict tabus of the usual kind; the very families holding the hereditary right to conduct the harvest were called sacred (see Pliny's *Nat. Hist.*, XII, 30). The connection between malachite and turquoise was probably inferred not only from the process of making the glaze, but also from their being found in close proximity in some spots in Sinai, as I have been informed by Mr. T. A. Rickard, the mining engineer, well known for his researches in early metal-getting; the minerals are deposited in quite different strata and are of very different composition, turquoise having an alumine base, yet chance has brought them together in places, and the Egyptians, quite ignorant in the matter of composition, might well believe that there was a material connection between them, the more so for the greenish tinge common, as noted above, in the Sinaitic turquoise.

The colour blue received also great honour with the precious lapis lazuli imported to Egypt in predynastic times, but not so far back as the Badarian; it came from a great distance, the nearest source known being Badakshan, in N.E. Afghanistan, and it must have passed on its way to Egypt through Babylonia, where it has been found in the earliest strata at Ur, recently unearthed by Woolley, and was always valued as the heavenly stone. In Egypt also, perhaps following the Babylonian precedent, it was connected with things divine, such as the hair and bones of gods, and even the gods themselves, for Amun and Min have been given the epithet of "lapis blue"; in Ptolemaic writings it is identified with Hathor, and the sun is said to make the fields blue with its rays, a phrase which indicates clearly the mental connection between the colours blue and green in respect to earth-fertility, and explains how Amun, at least in his ithyphallic form, and Min came to be described as blue.¹⁵ In Palestine also lazuli was a heavenly stone, translated in the Bible as "sapphire," for it composed the pavement of the Divine Throne; also the Jews were commanded to insert a blue cord in the fringe of their dresses, *Numbers* xv, 38; both cases are probably derivative.

Another parallel case is found in China, with regard to lazuli blue, for the word *louo-ts'ing* denotes a mineral colour, much used in painting from the VIIIth century onwards, ranging from malachite green to lazuli blue (see R. Petrucci, *Les Peintres Chinois*, pp. 44-8).

The generic Egyptian name for blue is *irtyw*, and it is noteworthy that it also signifies a "mourner," probably from the colour worn on dresses at funerals, as Dr. Alan Gardiner has kindly pointed out to me from the coloured copy, by Mrs. N. de G. Davies, of mourners in the tomb of Ramose recently exhibited in the British Museum. The blue is of turquoise tint, whereas in modern Egypt, where blue is still the colour of mourning, it is of a dark tone, probably from the use of the more recently introduced indigo. Thus blue, the symbol derivatively of fertility, became also that of mourning, an apparent contradiction in ideas, but not so in reality, for the mother-goddess, in Egypt as everywhere, was the protectress of the dead; ¹⁶ mourners wore the livery of Hathor, her Egyptian avatar, in order that by this manifestation of their devotedness they should ensure her protection of their loved one in the grave.¹⁷

In the Greco-Roman world Isis, who was then the successor of Hathor in her part as mother-goddess, is represented with her head covered with a fringed shawl tied at her breast in a conspicuous knot and, according to Apuleius (*The Golden Ass*, bk. xi), of the deepest lustrous black. In much earlier times Homer (*Il.* xxiv, 93) shows us women donning for mourning a head-veil as darkly coloured as possible, and so it would seem that when the later Greeks figured Isis wearing such a veil they were actuated by the same ideas of the great goddess, in relation to mourners, as were the ancient Egyptians, but by an inverse process clothed her, when adopted as Isis, in their national mourning-dress already consecrated by age-long custom.

The most popular presentment of Isis during the Late Period of Egyptian history was as a mother suckling her infant Horus; its popularity was fully maintained through the Greek and Roman periods, and eventually had a very strong influence on Christianity. This circumstance, while often admitted, has been as often denied because during the first three centuries A.D. adoration of the Virgin Mary does not appear, and was indeed banned by the heads of the Faith; but the mere fact of the ban shows that there was a popular, as opposed to an official, movement to accept her as filling the place in the people's affections that had formerly belonged to Isis; indeed, there are literary indications of this movement in the apocryphal Gospel of James. In the IVth century the conversion of Constantine caused a great influx of pagan converts to the new religion of the Court and, with it, the introduction of many pagan customs; as one of the results, the adoration of the Virgin Mary was openly practised and gained great strength.¹⁸ The attributes of the later Isis were largely transferred to the Virgin Mary, who was honoured under the same title, Queen of Heaven, became the special patroness of sailors and the sea, and had as symbols the star and the crescent moon. In this collocation of attributes we see a mixture of the Egyptian and East Asian forms of the mother-goddess, for the star was the symbol of Ishtar,¹⁹ while the moon appears to derive from the sun-disc worn by Isis, and mistaken by the Greeks for the moon; Isis, too, was the patroness of the great lighthouse of Alexandria, the Pharos, and hence protector of sailors and mistress of the sea—though possibly the idea of the sea may have been fortified by that of Aphrodite, the Greek heiress of Ishtar. Finally, doves are the constant companions of the Virgin, as of the Babylonian mother-goddess.

Now the traditional colour of the Virgin Mary's dress is blue, and immediately suggests a connection with the blue of Hathor and the Chaldaean divine system. There seems to be no evidence that Hathor or the Babylonian mother-goddess, in any of her manifestations, was specifically clothed in blue, likely though that would be; if there were any connection between them and the Virgin in this matter it would be through Eastern Asia, for the dress of Isis in the Greek period was, as we have seen, characterised by the black of mourning. Be that as it may, blue had been for countless generations the emblem of the beloved mother-goddess, and its transference to the Christian personification of a mother's protective love was most natural.

G. D. HORNBLOWER.

REFERENCES.

¹ See *Journ. Egypt. Archæol.*, XV (1929), pp. 38-40.

² See *Journ. Egypt. Archæol.*, XIII, p. 245.

³ See *Beni Hasan*, I, p. 69, and pls. 28 and 31.

⁴ See Petrie's *Researches in Sinai*, p. 41, and Fig. 47.

⁵ Many references might be made to writings on this subject; it will suffice to mention Frazer's *Golden Bough* (2nd ed.), I, pp. 126-232 (for Egypt, p. 172). For a modern example of tree worship in Egypt, unconnected with a saint, see my article in *Man*, XXX, Feb., p. 17. Prof. Sayce has noted a case of offering to a sacred tree in Upper Egypt; it was surrounded by a ring of stones.

⁶ See Sir J. Marshall's *Mohenjo-Daro*, I, pp. 52, 63-6, and pl. XII, 12; another example is adduced where a lotus replaces the tree. Here we seem to have an early manifestation of the idea underlying the symbolism of the lotus. Born in the waters, very striking to the eye, it typified fertility through water, and it is not surprising that in lands of settled agriculture, India or Egypt, where the dependence on water for the very material of human life was well ascertained, the lotus became a symbol of great gods or goddesses, being attached in Egypt at one time to Horus and, in the late period, to Isis.

⁷ See Wilkinson, *Ancient Egyptians* (Birch's ed., 1878), I, p. 118; Budge's *Book of the Dead* (1900), I, pp. 204, 208, 211, and II, p. 231; also his *Papyrus of Ani* (Medici ed.), II, pl. 16.

⁸ See Budge, *Book of the Dead*, chap. 109, par. 4.

⁹ In Arabic *welî*, plural *auliya*; feminine *weliyeh*, plural *weliyât*.

¹⁰ See *Journ. of Palestine Oriental Soc.*, VII (1927), pp. 1-88.

¹¹ The worship of the tree-goddess had deep roots in Palestine, and greatly influenced the popular worship of the Jews who were constantly reproached, in the Bible, for setting up "Ashêrîm" at their altars, that is, images of the local goddess in the shape of rough-hewn figures resembling the menhirs of Brittany, the Channel Isles, and elsewhere; they were always made of wood, with the probable object of preserving the connection between the goddess and her tree. One such image was even set up by King Manasseh in the Temple of Jerusalem, and women wove hangings (coverings, lit. *houses*) for it there (2 Kings xxiii, 6 and 7). See, for Phœnicia, Ch. Virolleaud in *Antiquity*, V, No. 21, pp. 406 and 412,

where Ashêrat is an actual goddess's name, and, for Canaan, Hastings' *Enc. of Religion and Ethics*, VI, p. 754; in the latter work (II, p. 286, and VI, p. 678) "Ashêrîm" are interpreted as "poles," a sense retained by several authorities. It matters little which interpretation is accepted, for the "pole" could only refer to some form of tree-worship, closely connected with goddesses. (The Bible—A.V.—translates "groves.")

¹² See *Berlin Dictionary*, II, p. 56, Nos. 8-10 and 14.

* [To disinfect flies which might poison the eye.—ED.]

¹³ See Moret's *Le Rite Journalier du Culte Divin*, p. 199. In later times the use of green cosmetic seems to have been limited to the eyes.

¹⁴ See A. W. Blackman in *Z. A. S.*, Bd. 50 (1912), pp. 69-75. In later times the incense came to be imagined as representing the sweat of the god to whom it was applied, returning to him through its smoke.

¹⁵ See *Berlin Dictionary*, s.v. *hšbd*, III, pp. 324, ff.; and Pinches-Newberry in *J. E. A.*, VII (1921), pp. 196-9.

¹⁶ See *J. E. A.*, XV, pp. 31 f., and 34-6.

¹⁷ Blue is worn for mourning in many parts of W. Africa, probably derived from Egypt, whose influence there is shown in several other respects.

¹⁸ The facts are sufficiently set forth in Hastings' *Enc. Rel. and Ethics*, VIII, pp. 475 ff., sects. 2-4.

¹⁹ The connection of Isis with the star Sirius is not overlooked, but it is only one of her many mythological connections, probably dating from the rise of the solar cult in Egypt, into the circle of which, like Hathor, she had to be received.

RECENT ANALYSES.

MUCH has been done recently on the composition of ancient alloys. The Committee of the British Association on Sumerian Copper has obtained many specimens and received reports of analyses from Prof. Desch. The present statement is in continuation of that given in *Ancient Egypt*, 1929, p. 49.

Babylonia—

From Ur, Ist dynasty or earlier,	axe ..	15·0%	tin		1·0%	nickel.
	nail ..	8·8	"		$\frac{1}{4}$	"
Three Sumerian examples	.. ..	No	"	Up to 1·0%		"
Post-Sumerian	.. .. .	14·0%	"			
Just over the Flood deposit	.. ..	pure copper				
An early dagger	.. ..	20·0%	tin			
A late axe	.. .. .	1·6%	"			
Khafaji and Susa : 2000 B.C. and before—						
		copper,	with traces of	..		
El Obeid : Ist dynasty of Babylonia		copper,	no	..		
Later example	.. .. .	8·0%	"			
Kish : Bronzes with	.. ..	3·0% to 13·0%	"		Traces	..
Khorsabad : Iron had no nickel or manganese.						

Mohenjo-Daro—

Bronze with	.. ..	.. 5.0% to 19.0% tin	Up to 1.5%	..
23 to 33 ft. deep	1 in 4	lead up to 22.0%	..	
1 in 10 had lead, up to 15.0%		Iron 1 in 6 up to 4%	1 in 4 to 1.9%	..
Luristan bronzes (E. of Iraq)	..	up to 20.0% tin		
Makran (S. Persia): Bronze	..	up to 2.7%	..	Traces ..
Singbhum (India): Ores have Ni 5% of the Cu.—				
		ancient plate	3.5%	..
Burma: Axes	.. ..	.. up to 2.8% tin		
Zimbabwe: Spearhead	.. ..	.. 12.3%	..	
Rhodesia: Ores of copper have only traces				
of iron, lead, tin. In ore iron, slag				
Ni. 5.0% of the Cu.				
Thermi, Lesbos: Copper pure, and also not				
over	.. ..	..	1.6%	..

Sir Harold Carpenter has developed a method of microscopic study of surface, which avoids injury to the specimens, and has applied this to bronze and iron. A copper axe of XIIth dynasty, with 1.5% tin, had been hard hammered, so that edge was 112 hard (Brinell test), but the body 55 hard.

Iron at University College was examined. Axe about 900 B.C. had about 0.9% carbon at edge, very little elsewhere, edge quenched at 444 hard, and only 62 behind. Axe of 900 B.C. edge, 207 hard. Hoe of 800 B.C. was soft. Chisel 700 B.C., carbonised edge, 0.8% carbon, behind only 0.15% carbon. Knife, bronze handle, 1200 B.C. (?), carbonised to 0.7% carbon, had been heated to 750° C. and air-cooled, 270 hard edge. Double-edged dagger, hard in middle, 140; at edges 100. Sickie with steel blade, Roman, soft iron back, blade carbonised 0.35%, quenched in water, and tempered to 600° C. Dagger, about 1320 B.C., found in Philistine tomb (Bethpelet I, xxi, 90), was of steel with cast bronze handle; proved by snapping across without any trace of bending.

FLINDERS PETRIE.

REVIEWS.

Topographical Bibliography of Ancient Egyptian . . . texts, reliefs, and paintings. III. Memphis. By BERTHA PORTER and ROSALIND MOSS. 254 pp. 1831. 35s. (Clarendon Press.)

This splendid work continues its useful career. The labour of compilation can only be realised by those who have had to collect such information on a single subject. Here the whole field has been searched, and such toil will not have to be repeated till this is out-dated by future generations. Yet there are some omissions. On the plan of Khufu's pyramid there is no reference to the surveys of 1881-2, and the later government survey, nor to Borchardt's work. On the inner details there are similar omissions. The inscription of Pa-seb-khanu is not entered under the Temple of Isis. Similar omissions occur on the Khefren and Menkaure pyramids. The Ibis cemetery west of the pyramids is not mentioned, nor the detail of Campbell's Tomb, noted in 1881, nor the structure of Pepy's pyramid, nor the plan of the south pyramid of Dahshur. Also Khnum-Khufu does not appear in the Index.

Chester Beatty Papyri, No. 1. By ALAN H. GARDINER. 4to. 46 pp., 31 pls. phot., 30 pls. line. 1931. (Privately printed.)

This great roll was written under Rameses V; it is 10½ feet long and 8½ ins. wide. Excepting a little loss at the first column it is complete, and is in perfect condition.

The first part is an entire mythological text of the contendings of Horus and Seth. It begins with a scene of Horus as a child claiming the kingly office of his deceased father Osiris, and the comments of the various gods on the subject, in the court of the supreme god Ra. He plainly calls Horus and Seth "the two men who these eighty years past have been before the tribunal." Anat and Astarte are to be given to Seth, to compensate for Horus succeeding Osiris. The wrangling of the gods is of a very archaic nature, and Thoth is the only scribe who writes their letters. The whole style seems to go back to but little after the theophagy of the pyramid texts, and may well be of remote prehistoric age.

The second part is of Love-Songs, the most complete examples of such poetry. But the content is far beneath the poetry and love of beauty which belong to the songs already known.

After the encomium on Rameses V there are placed business memoranda. The first is of interest as giving the values of goods, all stated in *deben* of copper as the unit of account. The whole publication is splendidly produced, with faultless collotypes of the papyrus, and transliteration into hieroglyphs facing the hieratic. It will long be a monumental study of such material.

Digging up Biblical History. By J. GARROW DUNCAN. 8vo. 531 pp., 93 pls., 66 figs. 12s. 6d. (S. P. C. K.)

This work serves as a general conspectus of what is physically known down to 1930 of civilisation in Palestine. As such it will be useful, even apart from the point of view adopted in each case. The caves are fully described, and the uses of them for living, storage, or burial are discussed at length. The varieties of pottery are carefully distinguished. The ugly baggy pots of the cave period were followed by a totally different type of shapely vases with a flat base. In the plate given, it is implied that the change was due to the Copper Age, and it is associated with wavy ledge-handles, as in Egypt. The change of ideas and of production is so essential in nature that it implies a different race. These features are associated with combing of the surface and burnishing, which are distinguished by the author from "cave-dweller ware"; they "were, however, in practice early enough for the cave-dweller to use them, but they belong to the immigrant Amorite civilisation." This is a sound point of view, only for "Amorite" we should use "Copper Age." The racial names must be kept out of use until we know how many changes there were. By the by, the term "Early Bronze" should be utterly tabooed; it was a Copper Age, a long period in which malleable copper, with slight mixture of hardening alloys, was the regular metal, and determined the forms and treatment employed.

It is unfortunate that so complete a review of the subject was a little too early to utilise the more definite distinctions which are now available. We now know that the Copper Age began about S.D. 60 (B.C. 5000?) in Palestine, exterminating the Neolithic folk; and it ended by the incoming of the Bronze users of North Syria, who formed the VIIth-VIIIth dynasties of Egypt, about 3100 B.C., and exterminated the Copper folk. Each change was ushered in by a few fore-runners, but the racial change is shown by the loss of the arts and types which were extinguished. Further we see that the Bronze users decayed soon, and were superseded by Egyptians of the XIIth dynasty, who drew their character and ability from the south. The use of dates B.C. is better avoided unless some single system is followed, otherwise they become contradictory.

The races involved in these changes of civilisation must not be labelled rashly. Hittites and Amorites are suggested here as joint forebears of the Hyksos. But neither of these peoples are known to have used the horse, which came in with the Hyksos. Again, the characteristic dress ornament of the Hyksos was the toggle pin, with a hole through the middle. Exactly this form, and its ribbed and spiral ornaments, belongs to the Caucasus. Yet the Hittites came from Thrace and the Amorites were Semitic. The toggle-pin users were of neither of these origins.

There are frequent references to "glazing used in Egypt," "Egyptian fused glazing," "glazed dark yellow slip," for large pottery; yet glazing was only applied to white-paste faience on a small scale; not till Greek times do we find large examples of glazed vases. Cypriote pottery is said to begin to appear about 1200 B.C.; but we now know Anatolian painted pottery from 3000 and Cypriote imitations by 2400 B.C.

After the outlines of the successive periods there is a valuable summary of the discoveries site by site, with plans of different constructions, through the pre-Israelite age. The remains of the Hebrew age from the exodus to the exile are carefully dealt with, detailing the various fortifications. The accounts of the Samaria discoveries are very acceptable, as no such description has yet appeared in England. The first volume has the blessing of a separate index.

The second volume opens with the domestic building. It should be said that the bronze bedstead (p. 10) is akin to Assyrian work, and the plate is inverted. The religion and cult objects are fully described. The usual type of temple, with a wide forecourt having three chambers along the back, is the early form in Egypt (see *Hierakonpolis* II and *Abydos* II, L.). The scanty inscriptions yield all that is possible, and the burial customs are fully discussed with detail of evidence for cremation and cadaver burial together. The periods are carefully distinguished, and the types of burial in each period. The child sacrifice may be compared with that of a foundation deposit of a fortress (*Hyksos and Isr. Cit.* 29). The *kokim*, tunnels for burial, are dated as early as 550 B.C.

The chapter on work in stone and metals contains a full discussion of the complex rock tunnels of the Gihon spring. For the weights a complete list, in order of the units, is much needed. We hope that another edition will give scope for revision to include the latest results of excavation.

Egyptian Antiquities in the Nile Valley. By JAMES BAIKIE. 8vo. 874 pp., 31 pls., 107 maps and plans. 1932. 21s. (Methuen.)

This is an enlarged edition of Weigall's Guide of 1910, brought up to date regarding discoveries, and extended to the Delta. The original was a sound piece of work, and this successfully builds in the fresh material, and greatly amplifies the illustrations. It is emphatically the needful book for the intelligent tourist, and the scholar has nothing better without carrying a library. The late Dr. Baikie had the gift of assimilating exact knowledge and giving it out in doses fit for the public use, and in recent years had done valuable work in thus educating all willing hearers. The accuracy of this volume has been checked over by passing through the hands of the present head of the Cairo Museum, our old friend Mr. Engelbach.

Setting aside for a time the local connections, the account deals for over fifty pages with a tour of the Cairo Museum, to tell the tourist what he should see and how to understand it. This humanising of a museum will double the number of those who care to remember it.

JOURNALS.

PALESTINE DEPARTMENT OF ANTIQUITIES. QUARTERLY, I, 2.

Rock-cut tomb at Nazareth.—This is fairly dated by the (yellow ?) glass pendant with lion ; such stamps are of mid-third century. The lamps are consistent with this date.

A hoard of Byzantine coins.—These are from 500-612 A.D. Usual type.

The obverse type in the Second Revolt.—This seems to represent a tetrastyle temple, with the curve-topped ark inside. It is hard to see any resemblance to the Tabernacle, which is suggested.

Coins in the Palestine Museum.—These are local varieties, unpublished or little known. From Alexander Bala to Trajan Decius.

A mediæval Arabic description of the Haram at Jerusalem.—(Continued.)

Bibliography of Excavations.

The name of Khan el Ahmar, Beisan.

Ancient street levels in the Tyropoion Valley.—A fragment of the interminable complexity of the many buildings in Jerusalem.

QUARTERLY, I, 3.

This number deals solely with the Roman and mediæval periods—a second-century grave, a Byzantine memorial of the builder of the church at Michmash, Roman levels in the Tyropoion valley, and mainly an elaborate account of the Crusader's castle at Atlit. Three more plates of Roman coins, and more of the Bibliography of Excavations complete this number. The historical problems of early times do not seem to attract notice.

QUARTERLY, I, 4.

Mosaic pavements at 'Ein el Fawwār.—The spring here had a small chapel adjacent, with a pattern of red sprigs.

A portrait of Vitellius in rock crystal.—This is an old acquisition of the Jerusalem Museum. There is no proof that it is an imperial portrait, and for a reign of eight months it is strange to find so elaborate a work as a crystal carving. It is passably good for a material so baffling to art.

An inscribed epitaph from Gaza.—This is of the third century A.D., of one Charmandas, whose children "had received golden favours from the Egyptian kings whose riches were established of old." This seems impossible under the Emperors, and it implies a Ptolemaic date.

Excavations in Palestine in 1932.—This summarises various sites. Irq el Ahmar rock-shelter, with deposits from Bronze Age to Aurignacian. Khirbet et Tubeiqa, the site of Beth-zur, was occupied from the Hyksos to the Maccabees. The important remains are inscribed weights : the *pym* of 111 grains, the *beqa* of 90, and two *nesef*, 147 and 151 grains ; all of these are about 10 grains too light for the standards ; they have been falsified, or else heavily cleaned after discovery.

Ramát Rahél, a rock-tomb of Hellenistic date. Wady el Maghara, three Mesolithic caves. Megiddo; the great rock passage down to the spring at the foot of the hill was cleared out. At the outer mouth of it was the skeleton of the guard with a great bronze mace head. At the opposite foot of the hill are many Bronze Age tombs, from which 48 skulls were preserved.

Bibliography of Excavations, Jerusalem.—With a detailed map.

JOURNAL OF THE SOCIETY OF ORIENTAL RESEARCH, November, 1931.

M. Fossey proposes a methodical comparison of cuneiform texts that are scattered in different museums, and may belong together. This would entail a general catalogue arranged by names, a vast affair.

Mr. Campbell Thompson deals with Assyrian prescriptions for plasters.

The Rev. J. R. Towers edits the great Aten hymn in modern rhymed metre, though metrical versions of the psalms are not now in favour.

This journal gives valuable notes of the works on Assyria and the Old Testament, which are not supplied by any other English journal.

Magical Texts from a Bilingual Papyrus. By H. I. BELL, A. D. NOCK, and HERBERT THOMPSON. 54 pp., 3 pls. 1932. (British Academy, Milford). 7s. 6d.—This papyrus, from late in the third century, is written in Demotic and Greek. The charms prescribed are for a dream, for finding a thief, and mostly erotic. There are four pages of Demotic and two of Greek, with a commentary of thirty pages. The latter is by Mr. Nock, and touches on a vast number of obscure beliefs and customs. The old puzzle of Abrasax is not solved, though mostly referring to a late form of Horus or Shed. The magical value of the lizard is discussed at length, but no distinction is traced between the little bright lizards and the larger sizes which look uncanny, up to the big *waran* three feet long. This papyrus gives a view of the growth of magic, still in touch with old Egyptian mythology, but on the road to the wild gabble of the dark ages.

Seminarium Kondakovianum. 1931.

BELAIEW, N. T.—*The Daric and the Zolotnik.*—Col. Belaiew here continues his research on the descent of Russian weights from the Babylonian. Thus Babylonian high shekel 2×65.80 ; Solonic, 65.82; Lysimachus gold, 65.85; Russian modern, 65.82. The middle shekel of 129.2 had a talent of 930,000, and this was divided into 100 minas of 9,300, and further into 16 taels of 582 in China and India, brought also west by Etruscans. Col. Belaiew traces further steps in the mediaeval descent of weights.

BULLETIN DE L'INSTITUT FRANÇAIS D'ARCHÉOLOGIE ORIENTALE. XXIV (recently completed), fasc. 1, 2.

La Belle Fête de la Vallée. By G. FOUCART. 209 pp., 48 pls. 1924, 1930.

This forms a substantial volume but, beyond division into three chapters, there is no index or contents. It opens with the remark that the Greeks in Egypt were most struck by the festival appearances of the statues of the gods, carried out to visit all the sanctuaries and cemeteries. Beginning with the Greek period, the functions of choachytes and taricheutes are discussed. The older *kebt*, or purifying priest, was the origin of the choachyte who sprinkled the way for the procession. The great festival was that of "the Valley," *ant*, beyond the Memnonia.

The great boat of Amen, the "Userhat," is described; it appears in scenes

from the XVIIIth to the XXIVth dynasty, and there is even a fragment known as early as the XIth. It was made of *ash* wood from Rutennu, plated with silver and gold; the shrine on it was of electrum. In the Nile procession it was led by the ship of the king with sixty rowers. The sacred boat under Ramessu III was 120 cubits, 223 feet long. The principal gods are all figured as attending in the procession. The various representations of the portable sacred boat are in a series of three: (1) the appearing from the temple; (2) the visit to the east; (3) the visit to the west, in conformity with the united functions of Amen and Ra.

The third chapter is on the "precursors of the sun." These are in the scenes of the tombs at Deir el Medineh: the long body of the goddess Nut is in the midst of the roof, and along each side of the vault is the stream of Ocean. The oldest paintings have the Sycomore of Life above the head of the goddess; later the goddess is identified with the Tree Spirit, and provides for the dead from amid the tree. Other sacred trees are also shown: terebinth, tamarisk, fig, dūm palm, and olive.

The Heliopolitan myths of mothers of the sun gave place to the Hermopolitan refinement of the myths, so that goddesses were sisters or daughters of Ra. Finally the Sun-god absorbed all varied worships in the figure of the triumphant Sun, creator and father of gods and men. This maze of incoherent mythology of later times can never be grasped, however, until we can arrange each element in order of time and locality.

TOME XXX. MÉLANGES VICTOR LORET. 1930.

In the two parts of this volume (591 pp.) already issued two years ago, there are 42 plates due, but these are to follow in another part not yet issued.

P. PERDRIZET. *Le jeu Alexandrin de l'icosaèdre*.—This describes fourteen examples of polyhedra used in games. Four others are already published in *Objects of Daily Life*. The most elaborate is owned by King Fuad, bearing twenty faces, with numbers from 1 to 48, omitting several ciphers. Each face has the nick-name by which the throw was known. The source of several is obvious; 6 is "the day before the Sabbath," 8 is "polypus," 9 is "muses," 25 is "ephebos," perhaps an age fixed in Egypt; the highest throw—48—is Soter, *i.e.*, Ptolemy I, and the half of it—24—is Berenike. Eight other specimens have similar numbers. Others with twenty faces are marked 1 to 30, 1 to 400.

WESSELY, C. *Synopsis Florae Magicae*.—Names of 134 plants used in charms, with references.

JÉQUIER, G. *Une coiffure divine*.—This is the conical fluted head-dress, such as appears on the amulet of a Syrian god (*Anc. Eg.*, 1931, p. 75). African connections with a religious dance are noted, and we may add the figures in QUIBELL *Ramcsseum* IX, and El Kab.

WEILL, J. D. *Papyrus Arabes d'Edfou*.—Letters of about 700 A.D. concerning a cargo of fancy merchandise.

BOREUX, C. *Les pseudo-stèles c. 16, c. 17 et c. 18 du Louvre*.—These are probably parts of the sides of a model tomb, substitute for a built cenotaph. They belong to a Senusert of the XIIth dynasty.

COMBE, E. *Cinq cuivres Musulmans*.—These objects, dated from 1220 to 1428 A.D., bear inscriptions of the makers and owners. An astrolabe bears the names of three astronomers known as authors.

VITELLI, G. *Archivio di uno Strategos*.—Of the reign of Hadrian.

BAILLET, J. *L'anthropophagie dans l'Égypte primitive*.—Diodorus states that Osiris converted men to a corn diet. This may be confirmed by many references to eating human flesh; also Horus gave his enemies to be eaten by the gods. The pyramid texts refer to eating the gods. The instances of dismemberment, and apparent gnawing, on bones of prehistoric times at Naqada, bear out a ceremonial anthropophagy, at an age when it may have survived in order to honour the ancestors by uniting with their flesh, an idea still prevalent in Africa.

CAPART, J. *Un fragment de bas-relief au British Museum*.—This bears a scene with boys, one dressed as Bes (?). This may be part of a festival at circumcision.

PAUTY, E. *Une porte en bois sculpté, provenant de Bagdad*.—This is of early Arab work, under Persian influence.

FAIDER, P. *Sénèque en Égypte*.—The interest that Seneca expresses about Egypt points to his having property there. Owing to his influence with Nero, the prefecture was given to his friend Balbillus. Another prefect was his maternal uncle, and from allusions in his writings it seems probable that he had visited Egypt.

LEFEBVRE, G. *La statue "Guérissante du Louvre"*.—This figure holds a stele of Horus on the crocodiles. The text of this is largely the same as on the Zedher stele of Cairo.

BLACKMAN, A. M. *Inscription of Herwerre at Serabit*.—This text of the hot weather expedition is here edited and translated.

SPIEGELBERG, W. *Der ägypterkönig Proteus*.—This paper would identify the mysterious Proteus with the Nile-god statues.

GAUTHIER-LAURENT.—*Objets égyptiens du musée de Langres*.—(1) A stele of Sebek-dudu born of Hapy, and wife Senusert born of Nefermaot, with a long family. (2) A relief of offerings in early XVIII, no name. (3) Label of wood of Mesmes, early XXI. (4) Four canopies of Ankh-hor-py-khred.

GRIFFITH, F. LL. *Four granite stands at Philae*.—One is of Ptolemy Euergetes I and Berenike, another was probably a fellow stand. A third is of Taharqa, naming the region as Taqemps=Tachompso. The fourth was to bear three statues of Philometor, Cleopatra II, and their son, as inscribed in demotic.

MALLON, A. *L'origine égyptienne de l'alphabet Phénicien*.—This paper elaborates an hieratic version of De Rougé's theory. The hieratic ranges of signs gives much more elasticity of choice. Near comparisons are reached between the Ahiram alphabet and forms of hieratic. The ulterior question is the distance between these forms of Ahiram and the European alphabets, which are much closer to the early signary of foreigners in Egypt. We still need many more early inscriptions to clear up the various links that seem possible.

HENNE, H. *Sur un édit d'Hadrien*.—This is a revision of earlier transcripts.

GARDINER, A. H. *Two hieroglyphic signs*.—These are the loop of rope (*shes*) and the tied-up bag (*seshr*). The early examples of form are quoted, and the usage phonetically in each age, with full discussion of words in which either sign is used.

NAGEL, G. *Représentations de chevaux . . . du Nouvel Empire*.—These horses are of the thick-necked, short type, piebald black and red on white. They are drawn with much free spirit, on the way to Ramesside decadence

GIRARD, ST. PAUL. *Un fragment de la vie de St. Arsène*.—This portion describes the visit of Arsenius to Theodosius, who commits his sons, Honorius and Arcadius, to the tuition of the Saint.

PICARD, CH. *Les influences étrangères au tombeau de Petosiris*.—The foreign influences, whether Persian or Greek, are discussed. M. Montet has proposed that the changes from Egyptian style were due to Persian art, and this is strongly contested by M. Picard. Before settling this we need to revalue the sources of Greek art. How much that we recognise as Greek was really due to the superior material civilisation of Persia? This question is abhorrent to the Hellenist, but it must be seriously faced before we label work as Greek or Persian. The "satrap" sarcophagus in Constantinople is a cardinal example of what is due to Persia. There we see the same feeling for massive, draped forms in slow motion, like the work of Petosiris, but foreign to Greece. The full draping of most of the male figures is in Persian taste. The specific details on which M. Picard relies for Greek evidence may be due to Persian influence in Greece. After 480 B.C. Greece was saturated with Persian art-treasures and Persian slaves, left behind in the flight of Xerxes, and after the wreck of the 300,000 men with Mardonius, to say nothing of the innumerable camp-followers and baggage left along the route. Thus the presence of links with Greece proves little compared with the resemblance to the spirit of Persian art which is seen in the character of the design and dress.

BUCHER, P. "*Les textes . . . du ce qu'il y a dans la Douat*."—Here the text of the close of the first three hours is compared, from the tombs of Tahutmes III, Amenhetep II, and Sety I. These were based on a manuscript, which was defective, but best copied in the middle example, noting lacunae. The versions are set out in parallel lines for comparison.

GAILLARD, C. *Représentations du Martin-pêcheur pie*.—The kingfisher hovering and diving is in Egypt the most beautiful sight of animal life. Here the swallow and kingfisher are described, and their representations on the monuments compared.

WIET, G. *Inscription de Malik Zahir Gazi à Latakiah*.—This is mainly occupied with the history of this son of Saladin.

SCHEIL, V. *Inscription de Darius à Suez*.—This reports various fragments.

CHASSINAT, E. *Le Mar du roi Menibré à Edfou*.—The *mar* was a station where a statue of a god was exposed for adoration. In the text naming it, the name of a king is given, which has been read Ra-men-kheper, but which is stated to be more truly Ra-men-ab. This name is familiar on scarabs of about the XXVth dynasty, which could not possibly be dated to the Middle Kingdom. It is fruitless therefore to dally with Menabra in that connection. XXX, 11^e partie.

KEIMER, L. *Remarques sur la huppe*.—Two bronze figures represent Horus holding a hoopoe. The knowledge of the hoopoe, figures of it in painting and sculpture, and even in modern tatuing, are given, with the references in classical authors.

LAUER, J. P. *Monuments du roi Zoser*.—This outline of the whole of the discoveries is most valuable as the opinion of the man who knows them most intimately, and has reflected most carefully. The princesses whose tombs adjoin the pyramid may have been the daughters of Zoser, or wives descended from his predecessors. After noting several indications, the conclusion is that these so-called tombs were the chapels of the *sed-heb* of the south and north. The bar-holes cut in the capitals of the columns are taken as being for holders of the masts set up before the chapel, as indicated on the hieroglyphs of such shrines ; or else for supports of ensigns, such as the falcon or jackal. The temple of the *sed-heb* is then discussed, and the separation of the daily cult from the festival. The arrangement of the pyramid temples is described ; also the suggested course of the *sed-heb* ceremony in the special enclosure for it. No reference to the *sed-heb* chapels of Sonkh-ka-ra or Senusert III is given, but the change from a site near the burial to a choice of the highest ground implies an alteration of beliefs.

TILL, W. G. *Die Vokalisation des Fayyumischen*.—This traces the dialectic variations of many words in each of the different regions.

TRESSON, P. *La stèle de Naples*.—This stèle was found in the temple of Isis at Pompei. It was an adoration of Hershefi by Sam-tau-taf-nakht, son of Zed-sam-tau-tauf-onkh. The historic references to the defeat of Egypt by an Asiatic, and the later victory by the Greeks, and return of the priestly family to Heracleopolis, are attributed to the time of Nabonidus II and Alexander's defeat of Persia. Yet it is certain that this official lived under Psamtek I, as his statue has that name (*Mon. Div.*, 34 g) ; also observe the names of Tafnekht and of Pankhy (*Stud. Hist.*, iii, 234, and Griffith, *Rylands Papyri*, iii, 73).

BEAUVÉRIE, M. A. *Quelques fruits de l'ancienne Égypte*.—The *Hyphaena*, *Juniperus*, and *Phoenix* described do not add to the list in *Descriptive Sociology*.

SCHUBART, W. *Die Boule von Alexandria*.—This discusses the newly found papyrus on the constitution of Alexandria.

COLLART, P. *Quelques exercices scolaires*.—These are a school papyrus and two ostraka.

CLÈRE, J. J. *Un passage de la stèle du général Antef*.—A long grammatical study results in rendering *hšb-t* as the judgment of the person, or an episode in the judgment, and the hall in which it was given. It is the "reckoning-up" of the man altogether. The whole passage is rendered "May the deceased arrive at the divine judgment-seat, at the place of the gods ; that his *ka* be with him, and his offerings before him ; that his voice be known as exact, that he answer that of which he is accused, and that he be acquitted by his reply."

(To be continued.)

NOTES AND NEWS.

His Majesty the King of the Belgians has been graciously pleased to honour English Egyptology by conferring the insignia of Officer of the Order of Leopold upon Sir Flinders Petrie.

With much regret we learn of the death of Mr. Leonard Loat, who worked with the Egyptian Research Account at Gurob in 1905. His discovery there was a cemetery of fish, some of great size, which followed on his five years' survey of Nile fishes for the Egyptian Government, up to the Equatorial Lakes. He also did much zoological exploration in tropical lands.

At Megiddo a most remarkable clearing has been carried out by Mr. Guy. A wide hollow full of rubbish was followed out, and found to extend through all the strata of ruins down to the rock, forming an immense crater, with a stairway down the side. At the rock it becomes a vertical, square shaft, about sixty feet deep, and twenty feet square. From this a sloping tunnel leads down to a spring which rises at the foot of the hill. Thus the internal water supply was assured for the city, and the long, steep, slippery stairway speaks painfully of the duties of the "drawers of water" among the conquered Canaanites. The spring below was cut off from outer access by walking across it; only a narrow door was allowed, and beside it was found the skeleton of the doorkeeper, with a large mace-head of bronze.

BRITISH SCHOOL OF ARCHAEOLOGY IN EGYPT.

The Exhibition of last season's discoveries will be held at University College, Gower Street, as usual, from July 11th till August 6th, hours 10 to 5, and in the evenings of July 15th and 25th, hours 6 to 7.30. All the principal objects described in the articles on Gaza in this journal will be on view there.

HOSPITALS A NECESSITY, ARCHAEOLOGY A HOBBY,

we hear on all sides. Please therefore help us to cope with our heavy hospital bill (£75) for workmen who excavated our palaces of Gaza. Also we dug a canal 2½ miles long, at a cost of £100, to free the place from malaria. After 4,000 years' abandonment it is again a promised land. Help us to meet these charges for health of workers, and improvement of district.

GAZA PALACE AND TEMPLE.

To keep a boy or girl						£	s.	d.
digging for a week	..	..	..	..	..		6	0
for a month	..	..	..	..	..	1	5	0
for the season	..	..	..	..	..	7	10	0
To keep a workman								
digging for a week	..	..	..	..	..		10	0
for a month	..	..	..	..	..	2	5	0
for the season	..	..	..	..	..	12	0	0

Will you not dig by proxy and help to make these discoveries?

THE PAINTED HOUSES AT TELEILAT GHASSUL.

THERE is not much doubt that the early inhabitants of Canaan, who painted designs on their finest pottery, must occasionally have used the same means of decoration for the walls of their houses, and adorned them not only with conventional pictures or designs, but painted on them also scenes of incidents or ceremonies illustrative of their experience and beliefs, just as we adorn our walls with artistic paintings of landscapes or figures that have a general interest. We know that such painting may be prehistoric, as on the well-known tomb at Hierakonpolis.

Yet it has always been a surprising fact in excavation that no trace of any such art or decoration has been found in any houses discovered in Palestine. On Ophel the only trace of mural decoration which we found was on the walls of a rock-cut cistern. There the walls had been covered with two or three thick layers of mud plaster, the upper coat being carefully smoothed and all baked hard, probably by charcoal fires lit in the bottom of the cistern. On the surface of the smoothed coat was a heavy coat of the dark reddish-brown colouring so commonly found in the decoration of pottery, and this coat of paint had been renewed from time to time. We assigned the latest use of this cistern to the Byzantine period, and accordingly attributed the painting to the Byzantines. The cistern had undoubtedly been an old cistern re-used, but the plaster was of the type which we generally regarded as Byzantine.

In view of the recent discovery of paintings on the walls of houses at Teleilat Ghassul, it may be that our conclusions as to the late use of baked plaster on cistern walls, and of paint as a decoration or preservative on these, are wrong; indeed this cistern with its painted walls may belong to a much earlier period than we supposed. In none of the houses, not even of the Roman period, was a trace of paint found on the plaster of the walls: though in several cases the plaster remained intact on walls that stood several feet in height.

At Teleilat Ghassul on the Northern Tell, Père Mallon has found, in an area measuring 30 by 40 metres, three houses whose walls still stand to a considerable height, and all of them bore traces of having been not merely covered with colouring material, but adorned with extensive paintings, more or less conventional in style. The walls were of brick covered with two coats of plaster. The coarser under coat was about two centimetres or, roughly, almost an inch thick. On the top of this had been laid a much thinner coat of whiter and more refined plaster, which had been carefully smoothed for the reception of the paintings. The artist had evidently drawn a line straight across the wall at a fixed distance of 50 centimetres, roughly 20 inches, above the floor of the room, and above this line he sketched in and painted his pictures. The colours used were light and dark red, brown shading to black, yellow, and white, practically the ordinary colours used in pottery decoration of that period, and the materials used had doubtless been the same.

The size and extent of these wall paintings or frescoes is quite surprising. The artist did not decorate by painting a series of two or three small scenes at intervals on the wall. He covered the whole wall of the room from 20 inches

above the floor practically to the ceiling, it appears. In one house the fresco covered a space five and a half metres or about 19 feet in length, a measurement which not only indicates a considerable degree of confidence and ambition in the artist, but suggests also a room of unusual size, compared with the idea we have hitherto entertained of early Canaanite dwellings.

This fresco, however, has unfortunately suffered so much from scratching and denudation during and since the destruction of the town that it is quite impossible to form any idea of the subject-matter or even trace any figure or details of the picture.

In another house the wall measured 6 metres, or roughly 20 feet in length. This wall had been completely covered with a painted scene, of which only about one-third was dimly traceable. The fresco represented a series of figures, of whom six or seven persons remain. They stand on a horizontal line drawn by the artist 20 inches above the floor, and all are looking in the same direction, eastward, towards a shining object. The first two figures have their feet on a small stool, and appear to be seated. The others are standing. In front of the shining object, and facing these seven persons, stands a smaller figure which Père Mallon thinks may represent a servant or a priest. The fresco is too incomplete to allow our forming any definite idea of what it actually represented. Naturally, we incline toward a religious interpretation. If the details of the "shining object" had been more clear, or the attitude of the figures more discernible, it would have been easier to form some idea of the scene depicted. As it stands, apparently not much can be made of it. There remain, however, the two striking facts: the elaborate decoration of the wall, whatever its purpose, and the size of the room.

In the third house examined, three of the walls had been similarly covered with paintings, but only one wall bore definite traces of the picture which had covered it, and that a mere fragment. Here the subject-matter had apparently been different, and the painting may have represented a hunting-scene or a landscape. Near the top of the wall and facing towards the west is the figure of a bird painted in black. It has been somewhat damaged by scratches, but the general outline and several details, such as the head, breast, foot, tail, and wings, are well preserved and indicate the skill of a master draughtsman.

The fresco containing the figures and shining object seems to be of a conventional type and suggestive of a religious subject, but the figure of the bird "gives the impression of an art free from all convention and inspired only by nature" (Mallon). Successive layers of paint superimposed on these paintings suggest that they had from time to time been renewed.

Naturally, we are inclined to think that these houses were places of some religious significance or associated with some form of cult or other: but we are assured by Père Mallon that they are not palaces, nor temples, but private dwellings. Similarly at Kahun, even in workmen's houses, painting remained on walls, showing a façade of a house, and a scene of the interior. (*Illahun*, XVI.)

Whatever they were, these paintings throw a new light on the civilisation of the inhabitants of Canaan in the time of Abraham and Lot, for if the date assigned to the final destruction of this town be, as we suppose, about 2000 B.C., these paintings cannot date later than that period; and if these were private dwellings we are led to the conclusion that the people of this early civilisation, the wealthier at least, built houses with rooms of considerable size and decorated their walls with pictures exhibiting artistic skill. The general use of plastering

may account for the rarity of inscriptions remaining, for such plaster could not long withstand the dampness of the soil in the rainy seasons, apart from destruction by war or earthquake ; and we are not surprised that few houses have been found of an early date showing traces of plaster on the walls of the rooms or floor. It may, therefore, be due to climatic conditions and the exigencies of war and destruction that we have not previously discovered any traces of plaster and such elaborate decoration on the walls of Canaanite or Hebrew houses in Palestine. In Deuteronomy (xxvii. 2) Moses instructed Joshua, after he should cross Jordan, to set up great stones and plaster them with plaster, and write upon them all the words of the Law. If such plastered pillars took the place of carved steles to any extent in Palestine, we are not surprised that so few inscriptions have been left to us. Certainly, so far as the use of plaster as a preparation for painting or writing at this early date is concerned, the discoveries at Teleilat Ghassul leave no doubt as to the authenticity of the practice, at a period centuries before the time of Moses and the Exodus.

J. GARROW DUNCAN.

THE HIDDEN GOD.

THE prophet Isaiah describes how "that for which Egypt hath laboured, and the merchandise of Cush and the Sabeans" shall pass over to Israel, and how these nations will follow Israel in chains and acknowledge that Yahweh is the only god.

The words he puts into their mouths are as follows (Isaiah xlv., 15) :—

"Only in thee is there a god and there are no gods beside.

Yea, verily, Thou art The Hidden God, Thou God of Israel, Thou Saviour!"

I venture to suggest that in the curious title **אֱלֹהֵי מְסֻתֶּהָר** (lit., A.V., God that hidest Thyself) the prophet definitely plays on the name AMEN, meaning properly "Hidden One."

This gives point to the whole oracle. Egypt and her satellites will come over to Israel and will recognise that Yahweh, and not their own deity, is the real Hidden One.

THEODO HERZL GASTER.

A PORTRAIT HEAD.

LONG ago I bought in Cairo a little head modelled in gesso. The individuality and audacity of it are attractive; the satirical expression mocks, while the eyes and brow are those of a self-contained master of men. It was clearly a portrait, and as such could hardly be intended for other than Caesar—Caesar laughing at the Alexandrians with contempt. The head, however, seems too narrow to agree with some other portraits. On the other hand, it agrees with the character of the coin portraits, and the shape of the head agrees with the discarded bust of the British Museum. May not the more grandiose bust of Naples have exaggerated the cranium out of respect? This is here published for criticism, and possibly a rehabilitation of the discarded bust, as being perhaps copied from a lost original.



THE FINGER OF GOD.

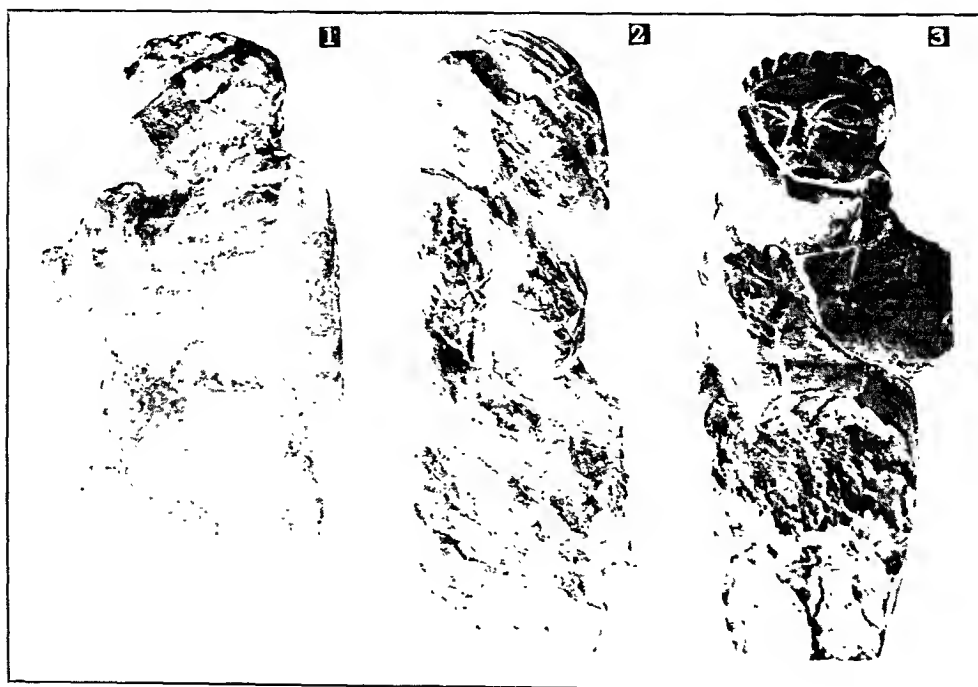
Below I take this opportunity to add a purely Egyptian *sacrum*, also in University College, a wood carving of a finger, springing from a falcon's head. That head was an emblem of Ra and of Horus, but also used for *sacra* in general, as on the oars and steering-posts of funeral boats. Such a symbol as a finger for divine action was familiar in Egypt. "Then the magicians said unto Pharaoh, this is the finger of God" (Ex. viii, 19), and the Israelite commandments were "written with the finger of God" (Ex. xxxi, 18; Deut. ix, 10). The same view appears in the appeal, "if I with the finger of God cast out devils" (Luke xi, 20).

No doubt the wooden finger shown in the illustration above was used in ceremonial and magical acts by the priests.

FLINDERS PETRIE.

AN EARLY SED-FESTIVAL.

AMONG the objects found in the great *cache* at Hierakonpolis were two limestone statuettes, now in the University College collection. Both are somewhat broken, but are in sufficiently good condition to be recognisable. The larger of the two (figs. 1-3) approximates in style to the figure of the Scorpion King, and also to the dancing man on the large mace-head (fig. 4), and is therefore probably of the same period—before Nar-mer.



THE KING IN DRESS OF THE SED-FESTIVAL.

The two statuettes represent the King and the royal lady (wife or daughter) in the Sed-festival. The King is not bearded, but otherwise in costume and attitude he conforms to the conventions which are found later. This shows that the type of representation as well as the actual festival were completely fixed before the historic period. The headdress is the *nemes*-cloth, worn rather further back on the head than in historic times; but though the lappets hang over the shoulders, as with the later kings, the cloth at the back falls in horizontal pleats to the waist (fig. 1) instead of being twisted into the well-known pigtail. The attitude shows the King seated stiffly on the throne, the right hand resting on the right knee (fig. 2), the left holding the characteristic cloak of the Sed-festival across his body. The face is rather broken, but the features are still visible. The thick lips and small mouth are unlike any known king, but as

the eyes are of the same type as the Scorpion, I suggest that it may be a portrait of that King. Height of statuette, 9.5 inches (24 c.m.).



THE PRINCESS IN THE SED-FESTIVAL.



The royal lady is unfortunately more damaged than the male figure. The whole face has disappeared, probably by disintegration of the stone (fig. 7), and the legs have been completely broken away. Figs. 5 and 7 show that the figure is represented as seated in some kind of chair, perhaps a litter like those

occupied by the royal ladies on the Scorpion King's mace-head. The method of hair-dressing is interesting, as it shows that the long tresses over the shoulders, so marked a feature of later times, were certainly ringlets at this early period. The waves of the hair are horizontal at the sides, vertical at the back. As the damage to the face extends also to the top of the head, it is impossible to see where the vertical ripples begin, whether at the forehead or further back. The effect at the back is of an entirely artificial headdress put on, like the King's, over the hair, but in front the long curls over the shoulders clearly represent natural hair. This method of hair-dressing was not uncommon in the Ist dynasty and even earlier (see *Hierakonpolis* I, pl. ix), when the hair is horizontally rippled at the back. The fashion of bringing only one tress over the shoulder appears rather later and lasted only a short time. Height of statuette in its present condition, 6.7 inches (17 c.m.) ; it was probably somewhat taller when the lower part was complete, but was always on a smaller scale than the male figure.

M. A. MURRAY.

THE NOME COINS OF EGYPT.

IN the course of the reigns of Domitian, Trajan, Hadrian, and Antoninus Pius, several sets of bronze coins were struck in Egypt which bore on their reverses the names of nomes, with types which were evidently intended in some way to symbolise the nomes: and these coins have frequently been discussed with the object of discovering the reason for their issue. In the light of the fuller information now available about the coinage of the Roman province of Egypt, which is due in large measure to the work of the late Signor G. Dattari, it seems worth while to return to the question and review the evidence.

In the first place it may be said that there can be no doubt as to the mint at which these coins were produced. One or two of the earlier writers on the subject suggested that there were mints in the nome-capitals which struck a local coinage, analogous to that which was issued about the same time in many cities in other provinces of the Empire, particularly the Eastern ones: but this view has long since been dismissed as untenable, and there is general agreement that the nome-coins (which may be used as a convenient short title) must have been struck at the mint of Alexandria. They are exactly similar in fabric and style to the other issues of that mint of contemporary date, and the obverse dies used for them are, if not actually the same, at any rate from the same models that were employed for those issues. If they had been struck elsewhere than at Alexandria, it must have been with dies and by workmen sent up from Alexandria: and such a proceeding would be almost inconceivable, in view of the general tendency of the Roman administration of Egypt to centralise everything at Alexandria.

The occasions for the issues are, however, less clear; and attempts have been made to connect them with periodic celebrations or with some local activities in the nomes. But it is difficult to find any formula on this basis which will fit the irregularity of their appearance: nome-coins are known dated in year 11 of Domitian, years 12, 13, 14, 15, and 20 of Trajan, years 6, 7, 8, and 11 of Hadrian, and year 8 of Antoninus—*i.e.*, the Alexandrian years commencing in A.D. 91, 108, 109, 110, 111, 116, 121, 122, 123, 126, and 144. Obviously there is no periodicity in these dates, and Dattari's paper in *J. I. A. N.*, vii. (1904), pp. 177–202, effectively disposes of the theories put forward; his argument can be strengthened by the inclusion of the coin of year 6 of Hadrian, which had not been discovered when he wrote.

Not only are the issues irregular in respect of the intervals between them, but they vary considerably in the number of nomes represented in each. The one series struck under Domitian includes coins with the names of 8 nomes: the five under Trajan, respectively 23, 26, 7, 10, and 1; the four under Hadrian, 1, 3, 3, and 50; the one under Antoninus, 18. Some additions may be made to these figures by new discoveries, as most of the types are rare, and of several only one example is known; but they are probably accurate enough to give an idea of the relative extent of the issues. Furthermore, some nomes seem to have been more favoured than others at the mint: the Saite is the only one for which coins were struck in each of the eleven years mentioned; the Herakleopolite occurs in eight, the Upper Sebennyte in seven, the Hermopolite, Memphite,

and Oxyrhynchite in six, the Arsinoite, Menelaite, and Sethroite in five. Fourteen nomes are represented only in the series of year 11 of Hadrian, which includes all that appear in any other series except the Oasis, known only for years 12 and 14 of Trajan. It would be difficult to suggest any kind of local circumstances in the nomes which would prompt such spasmodic commemoration by the mint at Alexandria.

It remains to be seen whether any light can be derived from the types used, either in themselves or in their relationship to other coins struck at Alexandria at the same period.

The coins of the first issue, in year 11 of Domitian, are definitely Greek in style and spirit: the deities chosen to symbolise the nomes are, with two exceptions, Greek, and the only local colour is given by adjuncts. For the Herakleopolite nome, the type was a bearded nude Herakles, with his club and lion's skin on his left arm, and a griffin on his right hand; for the Hermopolite, a nude Hermes, with a caduceus in his left hand, and a baboon, apparently, on his right (the only example published is in poor condition); for the Memphite, Isis, with vulture-headress, holding a sceptre and an uraeus-serpent, with a bull standing behind her; for the Mendesian, a male figure, presumably Mendes, with Atef-crown, holding some unidentifiable object (here again only one poor specimen is known) and a sceptre, with a ram at his feet; for the Oxyrhynchite, Athene in two varieties, one with spear and sword, the other with Nike and double-axe; for the Saite, Athene with spear and shield; for the Upper Sebennyte, Ares with spear and sword, and with a stag at his feet; for the Sethroite, a similar Ares, but with an animal which seems to be a lion at his feet. It would appear that the general scheme adopted by the designers of these coins was based on the traditional equation of Greek and Egyptian gods, which went back at least to the time of Herodotus; they took the Greek deity who was regarded as the equivalent of the chief Egyptian deity of a nome, and placed on the coin his or her standing figure, after a Greek model, localising it by adding a sacred animal which they imagined to be appropriate; in two cases no Greek equivalent was available, so they fell back on Isis and Mendes, both personages well known in the Ptolemaic system of Graeco-Egyptian theology: and for some reason they failed to find an animal associate for Athene either at Oxyrhynchus or at Sais. Then, to prevent any mistake as to the nomes which they intended to represent, they added the names—a very sensible proceeding, as no one who was acquainted with Egyptian religious art alone would have recognised to what the types were designed to refer.

This issue was made at a time when the Alexandrian mint had just altered its practice in the choice of types as well as in their artistic treatment. Till year 10 of Domitian the range of types used for bronze had been limited; as a rule there were only one or two for each denomination at the same time, and they were often carried on for several years. For instance, from year 2 of Galba to year 7 of Vespasian, the normal types had been a bust of Nike for drachmas, one of Nilus for half-drachmas, one of Sarapis or Isis for diobols, and a Canopus or a hawk for obols. But in year 10 of Domitian several new types were brought in for each denomination, and the artists seem to have aimed at variety rather than uniformity; and the same tendency is very noticeable throughout the next four years. In these types the Greek element was much more pronounced than it had ever been previously in the bronze coinage; personifications such as Elpis and Tyche were figured, after Greek models; and, just as on the nome-coins, their names were added to explain who they were, thus emphasizing their

novelty. At the same time there was a marked improvement in the art and technique: the general appearance of the coins is much more like that of the issues of the Ionian cities than that of the earlier products of the Alexandrian mint; in fact, their resemblance to some of the bronze coins of Smyrna struck under Domitian is so close as to suggest that they were designed by the same artist. It seems reasonable to conclude that new artists were imported to Alexandria, possibly from Ionia, and directed to exercise their skill not only in improving the style of the coins, but in introducing fresh types; and, in carrying out the latter duty, they hit on the idea of using the traditional equations of certain Greek and Egyptian deities in connexion with particular places in Egypt in order to provide subjects for their designs. In short, the appearance of the nome-coins in year 11 of Domitian was linked with the artistic revival and expansion at the Alexandrian mint.

The coins of this series are all rare, and the output of them cannot have been large; possibly the idea was not viewed with favour by the authorities, as the types were not repeated in the years immediately following, and it was not till year 12 of Trajan that any more nome-coins were struck. (There is a specimen of a coin of the Memphite nome in the British Museum, which purports to be of year 11 of Trajan, but it has been tooled; a similar coin was obtained by Dattari, but he reported the date to be illegible; so the existence of nome-coins of this year requires more evidence before it can be taken as proved.)

The issue of year 12 of Trajan was on a much more pretentious scale: not only were more nomes represented—twenty-three instead of eight—but the coins were larger, of the drachma size instead of the half-drachma. But the style and execution were decidedly inferior to those of the pieces struck under Domitian; there had been a steady decline in the art of the Alexandrian die-engravers throughout the reign of Trajan, and, although the hand of a new designer can be traced in year 11, he did not introduce any improvement in the workmanship; the figures are clumsy and the lines coarse, and the whole impression produced is one of carelessness.

The types used to represent the nomes accord with this impression. For most of the nomes which had been included in the series struck under Domitian, the artists of Trajan repeated the old designs with little alteration: in the case of the Saite nome they gave Athene an owl, to help in differentiating her from the Athene of Oxyrhynchus, and the gods of the Hermopolite and Sethroite nomes were made slightly more Egyptian. But for the nomes which now appeared in the list for the first time, they did not trouble to devise varied postures, as the artists of Domitian had done on their coins; they simply took a few stock figures, a draped female, a youthful male, an armed warrior, or a bearded man, and used them over and over again, adding an animal or other object on the hand or at the feet of the figure as the distinctive badge of the nome. In the nome-coins of Domitian, it is possible to identify a worn specimen if the main lines of the figure on the reverse can be traced, even though the adjuncts and the legend are indecipherable; in those of Trajan, such a worn specimen might be ascribed with equal probability to three or four different nomes, as the adjuncts and the legend are the only distinctive marks. The sole departures from these stock figures are a Harpokrates with the body of a crocodile from the waist downwards, which appears with the name of the Menelaite nome in year 13, and a riding Helios for the Diospolite nome. A slight variation was made in years 12 and 13 for four nomes—the Aphroditopolite Bubastite, Herakleopolite, and Hermopolite—by placing the figure of the deity in a temple portico; but

this really amounted to nothing more than providing an ornamental frame for the type.

This standard scheme, as it may be called, of a divine figure bearing an object of special local sanctity is further evidence of the influence of Ionia on the Alexandrian coin-designers. The idea had been started there in the reign of Domitian, and rapidly became popular: for instance, at Ephesus a seated Zeus is depicted holding a cult-image of the "Artemis" of the city; at Colophon a seated Apollo with a similar image of the local "Artemis" Klaria; at Smyrna an Amazon, the mythical foundress of the city, carrying a model of the temple of Roma (Smyrna was the first city in Asia to dedicate a temple to Roma). Occasionally, also, an explanatory legend is found on the Asiatic coins of this period, though not regularly as on the nome-coins; the most noticeable cases are those of "Artemis" figures, which were very similar in appearance at several centres, so that it might be necessary to tell a stranger whether he was looking at a likeness of Artemis Ephesia or one of Artemis Klaria.

The series of nome-coins struck in year 13 of Trajan was more extensive than that of year 12; examples of twenty-six nomes are known, ten of which do not appear in the previous year, while seven have dropped out. But the general character of the designs remains the same: the new figures, except in the case of the Menelaite nome which has already been mentioned, are repetitions of the stock types with varied adjuncts. In the next two years the number of nome-coins decreased; only seven varieties are recorded for year 14, and ten for year 15, all being of nomes which had been represented in year 12 or 13 or both; after that the sole further issue of a nome-coin in the reign of Trajan, so far as present evidence shows, was in year 20 for the Saite nome.

The revival of the series of nome-coins under Trajan was contemporaneous with a great activity in the production of bronze drachmas by the mint at Alexandria. Till year 10 of his reign comparatively few types had been used, and the output cannot have been large; but in year 11 the policy was changed, and for the next nine years there seems to have been a constant search for new subjects to be used as reverse types for the drachmas. It was presumably in the course of this search that the types of the nomes were repeated and multiplied, just as they had originally been introduced when the variation of types was initiated under Domitian; and in both cases there is a marked similarity of treatment of the types on the nome-coins and on other series. An instance of this, in the case of the issues of Trajan, is the employment of temple fronts as frames for figures, which is very frequent on the drachmas of years 12 to 15, and, as already mentioned, occurs on four nome-coins of that period; it is never found on nome-coins of later years. The close connexion between the nome-coins and others in respect of types is also shown by the fact, to which attention was drawn by Dattari (l.c., p. 191), that some of the nome-types are used, without the names of the nomes, on coins which have consequently been ranked as ordinary issues in the catalogues which treat the nome-coins as distinct.

The interest of the mint in nome-coins seems to have waned for some years after year 15 of Trajan; the solitary issue for the Saite nome, in year 20, was repeated in years 6, 7, and 8 of Hadrian, and in each of the two later years it was accompanied by coins for two other nomes, in year 7 the Arsinoite and Herakleopolite, in year 8 the Hermopolite and Upper Sebennyte; all these were of the drachma size, and carried on the traditions of the Trajanic series as regards style. But in year 11 there was a new departure: nome-coins were struck in two denominations at once, both of which were smaller than any previous issues

of this class ; obols of this series are known for fifty nomes, and dichalka for all of these but four. The types of the obols are designed for the most part on the same scheme as those of the drachmas of Trajan—there is a stock figure of a deity standing and holding an object, usually an animal, which was regarded as symbolical of the nome. For the Herakleopolite, Memphite, Mendesian, and Prosopite nomes a second type, a bust of the local deity, is used concurrently with the common form ; for the Arsinoite, Hermopolite, and Pelusiate nomes a similar bust is the only type that occurs ; and for the Diospolite nome in Upper Egypt a riding figure, like that on the coins of Trajan, is found as well as the standing figure. The types of the dichalka are the animals or other objects that are placed as symbols with the standing figures on the obols ; the only ones that are not zoological are a female figure, resembling the personification of Elpis, on the coins of the Aphroditopolite and Thinite nomes, a crocodile-bodied Harpokrates on those of the Menelaite, Harpokrates seated on a lotus on those of the Phthemphuthite, a pomegranate on those of the Pelusiate, a bunch of grapes on those of the lower Sebennyte, a club on those of the Herakleopolite and Prosopite, and a double-axe on those of the Oxyrhynchite.

This issue of year 11 of Hadrian was made, like that of Domitian and the first of Trajan, just after a change appears to have taken place in the staff of the Alexandrian mint. In year 9 an improvement in the style of the coins struck there begins to be evident, and continues in the following years ; by year 12 the execution of the dies had reached a very high level. At the same time the multiplication of types proceeded rapidly, especially for the tetradrachms, which show a substantial number of new varieties in years 10 and 11 and a much wider range of choice than in the earlier years of the reign. The revival of the issue of nome-coins on a more extensive scale than before and in fresh denominations may well be connected with this movement. The fact that they did not continue to be struck in succeeding years, as had been the case under Trajan, may be explained as due to a change of policy at the mint which appears to have taken place in year 12 ; while the total output of coinage was not diminished, the number of types used was severely restricted ; only four types are found in the billon tetradrachms, and one each for the chief denominations of bronze ; and in year 13 the choice was further limited to two types for billon, with bronze as before. In these circumstances the discontinuance of the issue of nome-coins is not surprising.

The last set of nome-coins was struck in year 8 of Antoninus Pius, and was virtually a return to the traditions of the reign of Trajan ; the coins are of the drachma size, and the types closely resemble those used under Trajan, or, in the case of four nomes—the Busirite, Heliopolite, Libyan, and Prosopite—which were not represented in the series of Trajan, those of Hadrian.

This series, like its predecessors, appeared at a time when there was an outburst of activity at the mint in the designing of fresh types ; this activity had begun in year 4, among the novelties being several scenes from the labours of Herakles, and was very marked in year 5, when the number of these labours depicted was extended and other mythological scenes, such as the judgment of Paris and Orpheus playing to the beasts, were included. It continued till year 8, when, besides the nome-coins, a set of Zodiacal devices was produced, in which the signs of the Zodiac were combined with the planets. But this year seems to have exhausted the inventive powers of the artists ; hardly any fresh types appear later, and most of those newly introduced were dropped ; a few of the

Herakles groups were repeated, but the Zodiacal series was never revived, nor the nome-coins.

It will be seen from this review that the issues of nome-coins all took place when the Alexandrian mint was pursuing a policy of multiplying the number of distinct types that were struck, and the natural conclusion is that they were simply brought in to swell the number. Dattari held that they were in no sense medallic or commemorative, but belonged to the regular Egyptian currency ; and his view, which was based on an unrivalled practical knowledge of the finds of Alexandrian coins, must have great weight. Nome-coins are found in hoards mixed up with other bronze coins, and in the same condition of wear from circulation ; one of the difficulties in studying them is that the great majority of the specimens are so rubbed that the details of the types are indecipherable, as is the case generally with Alexandrian bronze drachmas ; the percentage of coins in good condition in a hoard of these drachmas is always very small. If they had been medallic in purpose, this would not have happened, as can be judged by comparing any collection of nome-coins with one of the later bronze series which were probably of the nature of commemorative medals ; such series were issued in year 10 of Severus Alexander, years 5 and 6 of Philip, and year 12 of Gallienus ; and the average condition of these coins is good, rarely showing much evidence of wear from circulation, though they are not infrequently found pierced for suspension.

The nome-coins may therefore be regarded as simply forming a part of the ordinary bronze currency. They are interesting to the student of types, as showing the ideas that prevailed at Alexandria among the hybrid Greek and Egyptian population concerning the nature of the worships that prevailed in the country districts—ideas that were by no means correct, as appears from the fact that the animals chosen to symbolise the nomes are in many cases not the sacred animals of those nomes according to the native theology ; and the addition of the names of the nomes to the types, which has caused these coins to be regarded as a distinct series, really only emphasizes their divorcement from actual religious conceptions, which required them to be labelled for identification. In short, the nome-coins have no genuine connexion with the nomes whose names they bear.

J. G. MILNE.

REVIEWS.

Excavations at Giza, 1929-30. By SELIM HASSAN. 4to. 118 pp., 81 pls. 1932. (The Egyptian University.) n.p.

The Excavations of the Egyptian University in the Neolithic Site at Maadi. By OSWALD MENGHIN and MUSTAFA AMER. 8vo. 65 pp., 78 pls. 1932. 12s. 6d. (Egyptian University.) 60 P.T.

At last Egypt is beginning to care for its monuments by practical work. A good beginning has been made by the energy of Selim Effendi Hassan and the guidance of Prof. Newberry. A large slice of the Gizeh cemetery has been taken over, and an area about 400 by 120 feet has been worked out. This is here planned and published. The plan on 1 : 175 is detailed and named throughout. The descriptions are full and exact, with plenty of block plans. The drawn copies are mechanically correct, though slight points might be closer if dry squeeze had been used. Here and there some faces tax one's faith, but there is no photograph to check Figs. 116 or 181. As copies, the plates are more faithful than drawings from other museums. Purely as a matter of appearance, outlines give a happier effect of intaglio signs than the solid black here used.

The small objects and pottery are held over for another volume, but some necklaces are interesting for the zig-zag spacer bars, which were not used later. It is well that an interesting group has been taken for the first strong flight in work, yet one that has no critical problems or great questions depending on it. After experience we may hope that some of the many crucial gaps in the history will be followed up, and new results obtained. The names of the tomb owners are Ra-ur, Meruka, Zefa-nesut, Nefer-unt, Akhet-hetep, Deda, Amby, User, Fefa, Ay, and Mersuonkh. The royal names are from Khufu to Neferarkara. It is amusing to see, in this and the following work, how Quftis are considered essential as diggers. The education of these villagers all dates from the work at Quft in 1893.

The clearance at Ma'adi is the opposite of the Gizeh work, entirely crude prehistoric remains, lying in a couple of feet of surface soil. Round huts, some square buildings, much pottery, and round scrapers of flint with long pointed flakes. These pots, similar to the cylindrical basalt vases of the Amratian, give the nearest data. The value of the site lies in the domestic material of that age, which hitherto we only know by tombs. Probably this is only a very poor sample of the culture, as there is nothing approaching the fine stonework already known. The direction by Prof. Menghin of Vienna has produced an account and full plans and photographs which are an excellent training for the new Egyptian school.

Antiquités Égyptiennes, Musée du Louvre. By CHARLES BOREUX. Sm. 8vo. 662 pp., 80 pls. 1932. 16s. 6d. (Musées Nationaux.)

This is a welcome outline of the great Paris collection, in which all the objects of importance are fully described. The plates are brilliant collotypes, on which hieroglyphs can be read at twelve lines to the inch. Naturally the artistic objects have been the most desired by collectors and visitors, and the pre-dynastic have but little space. This is the best and most practicable hand-catalogue on the Continent.

Report on Excavations at Jemdet Nasr. By ERNEST MACKAY. 4to. 81 pp., 18 pls. 1931. (Field Museum, Chicago.)

This site is about fifteen miles N.E. of Kish. It is a city which was destroyed about 3500 B.C., a period which can only be examined at the bottom of the great sites of longer history. It is therefore most favourable for study, providing on the surface the tablets belonging to the extremely archaic pictographic style of writing. Painting on pottery is stated to have ceased before 3100 B.C. in Mesopotamia. The pottery at Jemdet Nasr is both hand-made and wheel-made. Among the patterns there is the "hour glass" type of reversed triangles, which appears about 2400 at Gaza on imported vases. The cross-hatched triangle at J.N. is seen at Gaza by 3000 B.C. The forms of pottery are like those of the west in about half the figures, but few could be taken as really identical. Little dogs of clay are like those of neolithic Beth-pelet. These glimpses of the great field of early civilisation will need many additions before we can frame a general view.

Posthumous Essays. By HAROLD WIENER. 8vo. 136 pp. 1932. 7s. 6d. (Oxford University Press.)

The papers which were in progress when Mr. Wiener was brutally murdered by an Arab have been edited so far as practicable. They will repay careful reading. Though Wiener saw the fallacies of the classing of documents by means of the divine names, he had no hesitation in passing from that too facile test on to critical study of the confusions that have preceded the present text. This study needs the linguistic and legal training which Wiener brought to it, with a broad sanity in the historic probabilities.

The subjects here treated are (1) Isaiah and the siege of Jerusalem; (2) the Relations of Egypt to Israel and Judah in the age of Isaiah. In this he agrees that Sibe=So(Heb)=Shabaka, and notes that this will date Piankhi's descent to Egypt before 720 B.C., and Shabaka's rule before 713. As on the Egyptian side his date is 717-705, this implies that he did not hold the Delta till four years after being viceroy. The date of Hezekiah's accession is fixed to 727 B.C. (3) The arrangement of Deuteronomy xii-xxvi. Here the principle of the natural accretions to a code by adding case-made laws is fully pursued. (4) The Exodus and the Southern invasion. In this the problem of the Israel Stele is well considered with collateral details, identifying that reverse with the defeat of the first Israelite attack on Canaan, before the wanderings. (5) The prophecies relating to Tyre. (6) The conquest narratives; noting the obviously early date of the account. Among other papers, some historical, discussion of the Exodus should not be missed (pp. 96-99). These critical studies are essential in considering the early history.

Cirenaica. La stele di Tolemeo Neoteris re di Cirene. By G. OLIVERIO. 84 pp., 8 pls. 1932. (Istituto Ital. d'arti grafiche, Bergamo.)

This is a study of a large and perfect decree of Ptolemy Neoteris, son of Ptolemy V and Cleopatra, who was settled in Cyrene by decree of the Roman Senate in 163 B.C., though he dates his years from 170. In this decree he declares that in case of his not having any heirs he leaves the kingdom to the Romans, and in case of any attack upon him he relies on the alliance of Rome for protection. The decree is on a fine marble stele, and is declared to be a copy of that sent to Rome.

The Influence of Islam. By E. J. BOLUS. 8vo. 199 pp. 1932. 10s. 6d. (Lincoln Williams.)

This is a first-hand work, written with experience of India and the East. It deals with the history of toleration under early Islam ; the changes under Turks and Mughals, and the developments in modern Turkey ; then follows the study of the effect on Persia, Afghanistan, Egypt, and Africa. The legal aspect, the philosophical, and the mystical each have a chapter. The growth of arts and sciences, and the mental and ethical traits, conclude the volume. It gives a valuable arrangement of facts and details under each division, without any verbosity, but clearly constructed with the interest of a narrative. It should be read by anyone living among Muslimīn.

The Bible and the Scholar. By C. H. IRWIN. 8vo. 257 pp., 17 pls. 1932. 7s. 6d. (R.T.S.)

The author wanders about, from Eden to the Apocalypse, among various opinions, without seeming to value one more than another. At all events, the latest information has been assimilated, and this book will introduce the views of various scholars in a pleasing and informal manner, to some who may not have met them before. Each of the principal contacts of Biblical history with modern discoveries is here outlined.

JOURNALS.

Bulletin de l'Institut Français d'Archéologie Orientale. T. XXX—(continued from p. 63).

CHANTRAINE, P. *Grec Colossos*.—The termination—*ossos* is of the Asianic type of name, and the occurrence of the Phrygian city of Colossai makes this the more likely. We might suggest the question whether there was a celebrated great statue at Colossai. Paul in writing to the Colossians twice refers to an image (*eikon*), Christ the image of the invisible God, and the convert being a new man after the image of Him that created him; these suggest that an ikon naturally occurred as a simile in writing to Colosse.

CRUM, W. E. *Un nouveau mot Copte pour " navire."*—Most of the shipping names in Coptic are of Greek origin. The derivation of one from *kbnwt*, the ship of *Kpni* Byblos, seemed strained.

MOGENSEN, M. *Les oeuvres d'art de Tell-el-Amarna à Carlsberg*.—A dozen pieces of Amarna sculpture are here described fully, and some of them published for the first time. They are illustrated by four plates, comprising three heads of princesses.

NALLINO, C. A. *L'Égypte avait-elle des relations directes avec l'Arabie méridionale avant l'age des Ptolémées?*—This refers to the stele of Darius I, from Tell el Maskhuta, which names the land of Shaba in connection with a voyage. But this, as well as the reference to a land of Shabt by Horsiatef, are both rejected as unconnected with Saba in Arabia.

HUNT, A. S. *Lucius Silius Satrianus*.—This person was probably the Prefect of Egypt in 164 A.D. He is addressed in a legal case from Antinoe.

PEET, T. E. *An ancient Egyptian ship's log*.—A papyrus in Turin has lately been revised with further fragments. The ship belonged to the high priest of Amen, and was on a trading journey with the produce of the estates of the god. A strange detail is that the scribe Para-emheb and some men with him disappeared at Heliopolis, and search parties later could not find him. It looks as if he had absconded into the Wady Tumilat, perhaps owing to discrepancies in his accounts.

ČERNÝ, J. *La réponse négative d'un oracle*.—The positive reply, *hnn*, to bow, to assent, is well known, but the negative *hzn*, unwilling, has hardly been noticed. From the ostrakon Petrie No. 21, and one in Cairo, No. 25555, it is concluded that the phrase *noy ne-hăy-f* or the god "going back" signifies the refusal of a request, by receding, instead of bowing in agreement.

VARILLE, A. *Stèle du Vizir Ptahmes*.—This is in Lyons, and the text is revised here. It contains homage to Osiris, and dates from Amenhetep III.

LEFORT, L. TH. *Une citation Copte*.—The pseudo-Clementine treatise *de virginitate* has been supposed Syrian from the origin of the MS. Now it is found in a much earlier Coptic MS.

JOUGUET, B. *La politique intérieure du premier Ptolémée*.—This outlines the Hellenisation of Egypt, due largely to the founding of Alexandria. Most of the article lies in the footnotes, of much value for research.

LÉVY, I. *Kombaphis, Kombabos, HBBŠ*.—This paper rejects the identification of the Kombaphis, named by Ktesias under Cyrus, with the Khabbash who endowed the temple of Buto, during his rule of the Delta, in the Persian age. The link of the name with the Sumerian Kubaba and the Lucian Kombabos is noted.

GROHMANN, A. *Weizenpreis in Arabischen Ägypten*.—The price of wheat from 699 to 715 A.D. fluctuated from 8 to 20 artabas *per* dinar; and the dinar varied from 13 to 25 dirhems of silver. So bimetallism was impossible. The price amounts to between 3 and 8 grains of gold *per* bushel, or 16 to 42 bushels *per* sovereign.

COTTEVIEILLE-GIRAUDET, R. *Gravures protohistoriques de la montagne Thébaine*.—The lithic succession has been observed on the slopes east of Thebes, the west having been ravaged commercially. The Capsian (post-Mousterian) sites remain in the valleys, and show the late habitability of the present desert. The microlithic forms increased, leading to the Tardenoisian; polished flint appears earlier in Africa than in Europe, brought by the Asiatic migrants. The graffiti of animal figures are found in the shady ledges of the Theban mountain, closely like those engraved on pottery of the Amratian and Gerzean ages.

GAUTHIER, H. *Hymnes adressés au dieu Min*.—Altogether seven hymns are described of the dynastic age, and as many of the later period.

VIROLLEAUD, CH. *La Divinisation Babylonienne*.—The various kinds of divination are here distinguished; by examination of the liver, by astrology, eclipses, and horoscopes.

BISSEON DE LA ROQUE, F. *Notes sur Aker*.—This is regarded as a guardian of the future world, usually under the form of a double lion, or double sphinx. The nature, and connection with different gods, is detailed here under each period. It was essentially the guardian of the two horizons, of the rising and setting sun.

DRIOTON, E. *Un ex-voto à Imouthès*.—This is a finely worked kneeling figure in bronze, holding a girl on his hands, before a figure of Imhetep. But the latter is of coarse work, and has been patched on to a broken base in modern times, by someone who knew what was required to fit the inscription. The kneeling figure has a back pier, and on that and the pedestal is a prayer to Imhetep for Pedubast, son of Pa-her-asar, born of Ast-ar-dus.

RANKE, H. *Eine ungewöhnliche Darstellung des Neuen Reiches*.—These are figures of Hori, a priest of Amen, and another man, with a palm tree between.

TOME XXX, iii, iv.

WEILL, R.—*La racine i, "etre," generatrice de formes verbales*.—Not only the reed leaf but all other radicals connected with the sense of "being" are discussed in a long paper.

DENY, J.—*Inscriptions chronogrammes*.—Turkish tablet of the Mahmudiyeħ Canal, 1820.

DARESSY, G.—*Leontopolis du XIX^e nome*.—Four cities of the Delta were sacred to Uazet: (1) el Farain, Buto; (2) Taua, Tanta; (3) Nebesheh; (4) Leontopolis, Moqdam. A socket plate from the last has name of Uazet; many lion figures have been found. The tell is now nearly removed for sebakħ. The relations of the tell, and emendations of Ptolemy's positions are stated. Positions of various places are discussed.

GUIDI, M.—“*Nukat*” o *motti di spirito e doppi sensi*.—Forty-two pages’ annotation on a modern Cairene song.

PILLET, M. M.—*Tanis*.—This article is a stocktaking of the site as it now is.

BREASTED, J. H.—*The Pre-dynastic Union of Egypt*.—On the Cairo fragment of the Annals, seven out of ten pre-dynastic kings wear the double crown, so far as preserved. Very complete measurements of the Palermo and Cairo fragments show that in the spacing of the Annals there is no difference between them as large as the variations in each. The difference of thickness is not accounted for; but as was shown in *Ancient Egypt*, 1931, 9, the Annals must have been placed on a series of separate slabs, so the question of thickness is quite irrelevant. Also the exact composition of the blocks may vary, so long as they fairly matched in appearance.

MORET, A.—*La légende d’Osiris a l’époque Thébaine*.—This is one of the finest texts of the early XVIIIth dynasty. It is fully published, and commented on, but does not seem to add to our knowledge of the theology.

BARROIS, A.—*Beisan et l’Égypte*.—An outline of the Egyptian connections.

MONTET, P.—*L’Art Syrien vu par les Égyptiens du Nouvel Empire*.—A descriptive catalogue of the examples of Syrian art brought to Egypt. The different character of these objects from those of the Kefti and Cretans is pointed out. The arms, jewels, wands with female hands, and vases, are all described and discussed. A valuable list of material for study, to which we may add the Syrian ivory carving of scenes from Beth-pelet.

AIME-GIRON, N.—*Stèle Gréco-Juive*.—This is of Sabbatai of Tebercythis, aged 30, in the twentieth year of Augustus.

GUNN, B., and ENGELBACH, R.—*The Statues of Harwa*.—These are of the steward of Amenardus, from the Karnak cache. The full texts of all the statues of this steward are here published, and translated. Three *shawabti* figures are quoted. We may add another in University College.

KUENTZ, C.—*Chapitre 106 du Livre des Morts*.—In connection with an example at Buda-Pest the texts are compared from 24 sources, and from 30 papyri.

LACAU, P.—*La roi Rasuazen*.—Among the scrap stones laid to found the great hall of Karnak, there is a stele of this king with the second name Neb-ari-äu, as on fragment 126 of Turin papyrus (king 103 in Student’s History), with Ra added, as it is to various other names there. Neb-ari occurs as a personal name, “he is their lord.” The stele names Kebsa, who in the first year of Suazenra alienated his governorship of El Kab, which his grandfather had received from Ra-mer-hetep. From this it is accepted that fragment 126 follows on fragment 81, and the number of eight kings between the names, some with reigns of two or three years, would fit the family history. The conclusion is that the great space which separates the Middle and the New Empire is filling up little by little, and that the kings take a reality more and more tangible. So ends this portentous volume of 900 pages.

TOME XXXI, 1^{er} fasc.

JOUGUET, P.—*Dédicace Grecque de Médamoud*.—This is in honour of the greatest goddess Leto, the adaptation of Rait-tai, then mother deity of the place. It was erected by Aelia Isidora and Aelia Olympias, stolate matrons, having possession in the Red Sea trade.

COLLART, P.—*Papyrus Grecs d'Achmâm*.—These consist of a Coptic homily, on the reverse of which is part of an epitome of Iliad A ; extracts of Hesiod and Euripides ; a verse of Anthology ; a description of lands ; lists for public duties ; copies of official letters ; and lists of land taxes.

PAUTY, E.—*Pavillon du Nilomètre de l'île de Rîdah*.—This seems to have been purely Arab, probably superseding one in Babylon, when that became blocked. Plates of views and plans show recent changes.

Syria, XIII.

SCHAEFFER, C.—*Fouilles de Minet-el-Beida et de Ras-Shamra*.—Clearances have been made west of the great tombs, by trenches 20-25 feet wide, descending 8-13 feet to the rock. Rhytons in form of a fish, and conical painted with octopus, are found in chambers, and one great store of eighty wine jars of 43 P 8 type. Fine Aegean pottery is frequent, and the period is from the middle of the XVIIIth into the XIXth dynasty. Great quantities of the common Cypriote brown ware occur, also with the fluted vases. The alabasters are usual types of the same period, with duck-head toilet dishes, and little turned boxes with lids, all common Egyptian forms. How much of these we are to credit to Egypt or to North Syria becomes a question ; the Egyptian examples may have been copies. The bulk of the objects might as easily have been found in Egypt or in Gaza. The great jars, with painted animals or fish on the shoulders, are like those imported to Gaza, the origin of which is unknown.

Clearing deeper in the cemetery three strata of tombs are found, extending to 30 feet deep. The upper are of the XVIIIth dynasty. The middle stratum is separated by a barren layer above it. In this are scarabs of the late Hyksos age, with contracted burials, lying on the left side. The pottery includes Cypriote, like that known in the Lebanon. Scarabs of Du-ne-ra type appear, cheerfully regarded as having a king's name. The lower part of the middle stratum is attributed to XIIth and XIIIth dynasty. A seated figure of Khnumt-nefer-hez, queen of Senusert II, was found here. An account is given of the lower stratum. A stele was dedicated by a "royal scribe, over the treasury Mami, to Bâil Za puna" ; it is concluded that this is the Baal Tzapun, Zephon, "of the north." From the name Egrt occurring on tablets here it is supposed that this is the Ugarit of the Amarna letters, which was far to the north on the coast.

DHORME, E.—*Les peuples issus de Japhet*.—The conclusions in brief are : GOMER=Gimirri (Assyr.)=Kimmerioi. MAGOG, see Gog who dwells in Magog (Ezek. xxxviii, 1-2)=Gaga (Amarna), near Media. MADAY, Madi, Medes of Hamadan. YAWAN=Ionians of Cyprus. TUBAL=Tabal (Assyr.) next to Khilakku (Kilikia),=Tibar, Tibareni, who retreated from Cilicia toward the Black Sea. MESHEK=Mush-kaia (Assyr.)=Moschians, N.W. of Armenia. TIRAS=Turush (XIXth dyn.), Tursha (Gurob), Tursha (Med. Habu), Tyrseni (Etruscans), ? Tarsus. ASHKENAZ, Ashguza (Assyr.), king Bartatua=Protothuēs, father of a Scythian king Madues. RIPHATH, supposed to be in Paphlagonia or Bithynia. (If this is so, the previous Ashkenas may be connected with Lake Ascania in Bithynia.) TOGARMAH, Tigarimma (Assyr.)=Tegarama (Boghazkoi), between Carchemish and Harran. ELISHAH=Alashiya, Cyprus. TARSHISH=Tartessos in Spain, colony of Phoceans of Ionia. KITTIM, Kētioi (LXX), Kition or Larnaka, Cyprus. RODANIM=Rhodos, Rhodes.

SEYRIG, H.—*Antiquités Syriennes*.—This refers to the cult of Nemesis in classical times.

BULLETIN DE L'INSTITUT D'EGYPTE, XIII.

LOUKIANOFF, G. *Le Dieu Shed*.—The obscure god Shed was a foreign god, and is not named by Brugsch or Lanzone. He occurs in four periods: (1) as affiliated to Ra, Shu, Horus, and others in the XVIIIth to XXIVth dynasty; (2) thence to the XXXth he was stabilised definitely as a form of Horus; (3) down to the end of paganism he appears like Horus on the crocodiles, with a gazelle and other animals; (4) in Christianity he became St. George slaying the dragon.

The ivory wands of the VIIIth–XIth dynasties represent the controller of evil animals as Bes. The stele of Aa-kheper-ka-senb, under Tahutmes I, represent “the great god Shed” holding a sceptre and throw-stick before “Horus the great god.” On a Berlin stele, 224016, Shed holds gazelle, bow, spear, and mace, before Horus. On an Amarna stele, Isis gives life to Shed-Horus, also Shed with bow and arrows and throw-stick. A Deir el Medineh stele has the great gods above and, below, the family adores Shed. An amulet of wood is engraved with Shed-Ra, with bow and lion in left hand, gazelle and throw-stick in right, standing on crocodiles. Eight later examples are listed, but the above show the original idea of a destructive god of hunting. Thus it was like Shaddai, in Hebrew, the violent or consuming god.

LOUKIANOFF, ELISABETH. *Musée du Couvent Russe à Jérusalem*.—The Egyptian objects are: (1) A bust of Amenhetep III, fine work in red granite. (2) Basalt statuette, Ptolemaic. (3) Pieces of cartonnage with figures of a Hebrew and Philistine under a king's foot. (4) Bandages of mummies with scenes and texts.

ZEITSCHRIFT FÜR AEGYPTISCHE SPRACHE. LXIV. Part 2. 1929.

REISNER, GEORGE.—*Nefertkauw, the eldest daughter of Sneferuw*.—An inscription found in 1926 by the Harvard-Boston Expedition in the excavation of the tomb of Sneferuwkhaf, son of Neferma'at, disproves Sethe's theory that Neferma'at was the son of Sneferuw by his eldest daughter, Nefertkauw. (See two articles by Sethe on incest in Egypt in *Zeitschrift*, L. and LIV.) The father of Neferma'at was probably Cheops.

KEES, HERMANN.—*Kulttopographische und mythologische Beiträge*.—From preliminary studies in the syncretism that resulted from the absorption of lesser divinities by the great State gods of Egypt we learn that:—

(1) The name of the divinity, Hor-khui-em-nekhen, on no. 425 of Borchardt's *Statuenkatalog* (Part 2, 1925) is to be read as “The two children of Horus of Hieraconpolis.” Other variants of the name show that there was a cult of the Two children of Horus at Hieraconpolis, thus confirming a legend in Chap. 13 of the Book of the Dead about two mysterious beings who were embodied in the “Two hands” of Horus of Hieraconpolis and became the Two children of Horus.

(2) On the other hand, “the northern Horus” and “the southern Horus” were not local cults at all, but were deliberately created by the theologians.

(3) In the same way, “the eldest Horus” (*Hr šmšw*) is a purely theological conception.

(4) A curious instance of the fusion of a provincial god with a State god is shown by Hor-amuu, whereby the crocodile god of Panopolites is identified with Horus.

VON BISSING, FR. W.—*Die älteste Darstellung der geflügelten Sonnenscheibe*.—The writer has made out the sun's disc on the ivory comb figured in *Tombs of the Courtiers*, Pl. XII, 5, and Pl. II, 6. This is, therefore, the earliest representation of the winged solar disc. (Disc invisible, R.E.; F.P.)

VON BISSING, FR. W.—*Stele des Nechtmin aus der El Amarnazeit*.—The writer dates this stela to the first six years of Akhenaten's reign. The partial erasure of the royal cartouches, in which the aten and the sun's disc are left, and the possibility that the defacement of Nefertiti's name was intentional, suggest that the damage occurred in the year in which Meryt-Aten became Meryt-Amen and entered Thebes with Tutankhamen.

EBBELL, B.—*Die ägyptischen Krankheitsnamen*.—The following identifications are made: XXI, shefut=to moisten, moisture-emitting skin surface. In many cases this is moist eczema; elsewhere—like most of the Egyptian medical terms—this expression seems to denote a single symptom rather than a complete disease. XXII, T-uau=pyogenic membrane. XXIII, Okht-nt-muem-arui=cataract. XXIV, Saq-zefed en arit=to treat mydriasis. Evidently the ancient Egyptians believed, like the Greeks and Romans, that dilation of the pupil was the cause—not a result—of defective vision, and that “contracting the pupil” was, therefore, the correct treatment.

JERNSTEDT, P.—*Graeco-Coptica*.—(1) Σκατζύ. This remarkable word, which occurs thrice in the thirty-second miracle of St. Artemios, *Varia Graeca Sacra ed. Papadopoulos-Kerameus*, represents an original πικουτζί. This was the fourteenth century Greek transliteration of πικουτζι, “little one,” a term which was in daily use in the seventh century in Alexandria.

(2) терпосе, терпосѣ, терпосем. With demotic *tbi psi* (Spiegelberg, *Demot. Pap. Brussels*, p. 19, No. 8) in mind, the writer discusses under this heading the evolution of терпосе (burnt brick) from *теб-посе and sees in it an instance of Greek influence in Coptic.

(3) *Ein sprichwörtlichen Vergleich*. The first column on the recto of Bodleiana M.S. Coptic, g. 3, contains the proverbial expression, “like a drop of water hangs to a bucket.” This phrase is shown to mean not a negligible quantity, but something highly prized, like the last drop of a vessel's precious contents on a hot day, and the passage may be restored as follows: “And his soul cleaved to that of John as to a drop of water, which clings to a bucket in the heat of the day.”

Section (4) deals with *Two Biblical quotations in Schenute*, and the remaining six pages of this article are given to the fifth section, *υπωρα* “Fruit.”

MISCELLANEA.

SPIEGELBERG, W.—*Eine griechische Wiedergabe von s³ n-sw*.—A bilingual inscription on a mummy cartonnage in the University of Michigan (no. 4534) yields Siensis as the Greek form of the Egyptian name sy-n-sw, king's son, prince. This is the first time the writer has seen this title used as a name.

KEES, HERMANN.—*Noch einmal hw šdb cc. r.*—Further examples are given of the translation of this phrase as “to curse, condemn someone” (see *Zeitschrift*, LVIII=A.E., 1929, iii, p. 88).

BLOK, H. P.—*Zu Amenemope XVI: 16 ff.*—The meaning of *sh³* in this passage is “to ingratiate oneself with someone.”

VON BISSING, FR. W.—*Der Meister des Grabes des Merreruka-Meri in Saqqara.*—In the mastaba of the artist Ichchi is a relief that agrees in nearly every detail with one in the tomb of Meri of an anonymous artist. (See *Zeitschrift*, XXXVIII, p. 107, f. 1900.) It is, therefore, probable that in this Ichchi we have the artist who carved Meri's tomb.

L. B. E.

ZEITSCHRIFT FÜR AEGYPTISCHE SPRACHE. LXV. I. 1930.

SCHMITZ, A. L.—*Das Totenwesen der Kopten.*—Although the Copts practise certain purely pagan forms, such as placing food in graves, and use fertility amulets, yet the continuity in pagan forms traceable down to present times may be purely mechanical (e.g., certain tomb structures), and pagan features may now express a Christian meaning (e.g., the ankh).

ANTHES, R.—*Die Vorführung der gefangenen Feinde vor den König.*—One of the battle scenes depicted on the western outer wall of the temple of Rameses III in the precincts of the temple of Mut at Karnak (reproduced in Wreszinski's *Atlas zur Altägyptischen Kulturgeschichte*, II, 62a), shows the King in his chariot reviewing the prisoners and the counting of dismembered hands. The model of this scene is to be found on the western outer wall of the south wing at Karnak, where the battle of Kadesh is depicted. Like the ancient scenes of victory on Narmer's mace and palette, this scene shows actual events, and is not symbolical. It has its origins in XVIIIth dynasty graves and their sanctuaries (Davies, *El Amarna*, II, 37; Boeser, *Gräber des N.R.*, pl. 21 and 22; Wreszinski, *Atlas*, II, 161). This procedure was probably the end of every successful battle, and was not only typical of the Kadesh fight. The scene is always shown in representations of the battles of Rameses II and III, though in its later developments under Rameses III it is not to be interpreted too realistically.

SCHOTT, SIEGFRIED.—*Drei Sprüche gegen Feinde.*—B.M. Pap. 10,081, an undated papyrus of the time of Nectanebo, contains three ritual texts against slanderous enemies. Like the "Breaking of red pots" (see *Zeitschrift* LXIII=A.E., 1929, iii, p. 89), this ritual also is probably ancient; the recurrent line, "Sealed are all living mouths that speak against the King," may be compared with Pyr. Text 23, in which Osiris and Thoth shall destroy "all who hate the King and speak ill of his name." This ritual was to be performed over a figure of a rebel, made of wax or clay, and his name and his parents' names were to be written on a papyrus leaf.

NEUGEBAUER, OTTO.—*Ueber den Scheffel und seine Teile.*—The writer would break with the tradition that the Horus-eye parts are to be read as fractions of the *hekat*; they are whole multiples of the *ro*. The various units of measure are the *hnw* ($=\frac{1}{10}$ *hekat*), the *hekat*, the 10 *hekat*, and the 100 *hekat*, all with their fractions ($\frac{1}{2}$, $\frac{1}{3}$, etc.). These various *hekats* grouped themselves round the successive units which followed in decimal order in a "nucleus"; each nucleus contained, on the one hand, the multiples between 1 and 10, and, on the other hand, the "natural" fractions, $\frac{2}{3}$, $\frac{1}{2}$, and $\frac{1}{3}$, more or less complete. The whole series of capacity measures originally consisted of these separate "nuclei," and the big *hekat* measures and the very much smaller *ro* measures had at first nothing to do with each other. Only gradually was a fusion of these groups arrived at, resulting in the fixing of the ratio *hekat*: *ro*=1:320. The *ro*-nucleus kept its independence to the extent that its multiples were still written and reckoned as whole numbers. By this fusion, however, special multiples acquired the character of new units, e.g., 5 *ro*, 40 *ro*, and 80 *ro*, and

formed the bridges between the *ro*-nucleus and the *hekat*-nucleus. Of a secondary nature also was the description of these new units by the Horus-eye notation, whilst the original forms of the old units are recognisable in hieratic.

Throughout the article $\bar{4}$ is written for $\frac{1}{4}$, and so on, and $\bar{3}$ for $\frac{2}{3}$.

SPIEGELBERG, W.—*Ein Räucheraltar des Mittleren Reiches*.—An object in private ownership in Munich is shown to be an incense altar, by comparison with a similar object in Cairo Museum (Inv. 46322). It is suggested that some of the "pottery stands" found by Garstang at Beni Hasan (*Burial Customs of Ancient Egypt*, pl. XI, no. 205, 211, 212, and p. 195) may also be incense altars.

SPIEGELBERG, W.—*Eine Stele aus dem Anfang des Neuen Reiches*.—A stela is described and reproduced which is characteristic of the beginning of the XVIIIth dynasty, and which should not be omitted, in the writer's opinion, from a history of grave-stones.

SPIEGELBERG, W.—*Eine neue Erwähnung eines Aufstandes in der Ptolemäerzeit*.—A vacant space in Berlin Pap. 13608, which contains accounts and lists of various kinds, is occupied by a draft report from a village scribe in the nome of Pathyris of an attack by "the people of the rebel" on territory belonging to the nomes of Pathyris and Latopolis. There are no data for connecting this attack, which took place in the year 24 in the night of 22-23 Thoth, with the rising in the Thebaid that occurred in the change of government between Ptol. Alexander and Soter.

SPIEGELBERG, W.—*Befestigte Brunnenanlagen in Palästina*.—The migdols of Sethos I are explained as being in reality inside the fortress walls.

SPIEGELBERG, W.—*Zu dem alttestamentlichen Namen der Stadt Daphne*.—Further evidence is given of the identification made by Spiegelberg in 1904 of Tahpanhes with the hieroglyphic name of Daphne.

WILSON, JOHN A.—*On Papyrus Harris 78: 8-10; 79: 3*.—This article elucidates errors which may be attributed to mistakes in copying from a hieratic original.

EBBELL, B.—*Ein missverstandenes ägyptisches Wort*.—Khep-pa=genitalia pudenda, not navel or umbilical cord, which has been the translation hitherto.

L. B. E.

ARCHIV. FÜR ORIENT FORSCHUNG. 1932. P. 290.

At Medum, Alan Rowe has succeeded in opening the tomb chamber of Nefert. It had been entirely robbed, but there was part of a wooden coffin with grooved pilasters and recesses, four recesses at the end and seven at the side. In a small mastaba joining the south side of Rahetep's, a pit was found 44 feet deep, the lower 20 feet cut in rock. This entrance to the chamber was blocked with masonry, but it had been plundered through a hole in the roof. Hundreds of carnelian beads and a scarab pendant were found. On the wall was inscribed "The king's son Ni-hep."

PALESTINE EXPLORATION FUND, October, 1931.

GARSTANG, J. *The Walls of Jericho*.—The periods of building are dated to 2500 B.C., 2000, 1600, and 900. The tombs of the XVIIIth dynasty period were found and these, in the subsequent work, have each proved to contain hundreds of pottery vases.

GREGORY, J. W. *Geological researches in the Judæan desert*.—The coloured geological map of the Jericho region, by Dr. Picard, gives full detail. The

paper describes the various theories about the Dead Sea depression. From Dr. Picard's latest surveys, he concludes that the valley is due to two parallel faults, and the subsidence of the block between them; the fall on the west is 2,200 feet.

WAINWRIGHT, G. A. *Caphtor, Keftiu, and Cappadocia*.—In a previous paper the Philistines have been identified with the Keftiu, and they are called Caphtorim in O.T. The products and dress of the Keftiu do not agree with Crete, but with the neighbourhood of Cilicia. Lately a list in Egyptian with names "in the speech of Keftiu" has appeared. These are Sandas or Sandokos and Tarku, which are Cilician names. Other kinds of names bear out a Philistine connection.

The Lukki or Lycians were also coming from Anatolia, and the Hittite allies at Qedesh include Kelekesh, Cilicians; they came with Derden, Dardanians, and Kezweden of Kizzuwadna (Kataonia?). The Sherden people were independant down to the wars of Rameses III, but Rameses II had already recruited a body of them as his mercenaries. They are supposed to have come from Sardis.

It is suggested that the Philistine migration brought iron to the south. Iron was sent as tribute as early as Tehutmes III, from the land of Tinay, which also exported Kefti ware. Near Seleucia was Sagalassos, supposed to be the home of the Shekelesh people; and also Prostanna, in which Prost or Plast is suggested as the Palisti or Philistines. The Kefti Caphtorim were translated Cappadocians in the Septuagint, and the Cilician region borders on Cappadocia. There are also many connections of name and subject in this paper, and these may fall into place when we know more of the ancient and present state of the region.

SUKENIK, E. L. *Funerary tablet of Uzziah, King of Judah*.—This tablet has been lying unnoticed in the Russian library at Jerusalem. It only professes to have marked the spot to which the bones of Uzziah were brought at some later time. The style of panel and of writing point to a Hellenistic age.

PALESTINE EXPLORATION FUND. Quarterly. 1932.

April.

CROWFOOT, J. W.—*Expedition to Samaria*.—The excavation has been on the site of the Roman forum, finding Israelite walls below. A great water conduit was also found. Unhappily no date or building of definite importance was reached.

DUNCAN, J. G.—*Père Mallon's excavation of Teleilat Ghassul*.—The general account of this work has appeared in this Journal last year.

LUKE, H. C.—*The "great burnings" of Meiron*.—This is a fire festival held at a hill town, ten miles N.W. of the Sea of Galilee. On the thirty-third day after the passover, Jews assemble from all over the world. At night fires are lighted and offerings of garments, all soaked in petrol, are burnt up. Old and young dance round the fires, singing and shouting. The host of different national dresses adds to the wildness of the scene. As dawn approaches, snips of hair from the children are thrown in on the embers. This seems to be an old pre-Jewish May festival.

SUKENIK, E. L.—*The Judaeo-Greek cemetery of Jaffa*.—Two marble tombstones are figured and described.

COOK, S. A.—*A Nazareth inscription on the violation of tombs*.—This is a Greek version of an Imperial Latin decree, early in the first century.

COOK, S. A.—*Foundations of Bible History*.—This is a long review of Garstang's "Joshua and Judges"; the archaeological appeal is evidently distasteful, as not according with the speculations of literary critics. No rebutting facts are quoted, however; only a waiting attitude is adopted, asking for more evidence.

July.

CROWFOOT, J. W.—*Expedition to Samaria*.—A group of ivory panels carved in high relief has been found, probably belonging to a couch. The work is quasi-Egyptian, with figures of Ra offering Maot, Time with recording wands, lotus, Hor-pa-khroti, etc., in high relief. These are probably due to Phoenician artists, and are better than Egyptian work of the XXIIIrd dynasty. They come from an unexamined part, which may have been the palace of Ahab.

FITZGERALD, G. M.—*Excavations at Beth-shan*.—More clearing of the level of Sety I has not produced fresh history. Below the temple of Thothmes III two levels of building were uncovered. Painted pottery was common and, in the lower level, Middle Bronze Age ware, reaching even into Copper Age, with flat-bottomed, ledge-handle jars, also hole-mouth jars. These and the other small objects link so closely to the Gaza series that the dating can be carried on now as far north as Galilee.

GARSTANG, J.—*A third season at Jericho*.—The principal historical matter is the cessation of the series of scarabs at Amenhetep III, and the renewal of building in the Iron age, about 900 B.C. This shows that Egyptian trade did not reach Jericho after the Akhenaten break; but as we know that Sety I went from Hebron along the ridge to Pella, it is certain that Egyptians were in touch with Jericho. The question of the Egyptian relations in the XIXth and XXth dynasties still has to be explored.

NAISH, J. P.—*The Ras esh-Shamra tablets*.—This gives a summary account of the site, which has already been reported in this Journal. An outline of the contents of the tablets shows their great importance for the mythology of Syria. There are the names El, Elohim, Baal, Asherat, Resheph, Elat of towers, Anat of Gebal, Baalat of cattle, Astarte, Horus, and a myth-story of Alein son of Baal, his enemy Mot (death) son of El, and the virgin Anat. These suggest the Adonis myth, and that it was a tribal war between the worshippers of El and of Baal. The most complete myth is that of Alein son of Baal, his death and resurrection; this has been compared with the Adonis myth, but strangely it seems overlooked that this is the well-known classical Linus, son of Apollo, to whom dirges were sung in Greece. It is part of the Aegean influence here importing the Greek myth, and fathering Linus on Baal instead of Apollo; or else the Greek tradition was part of the Orientalising of the eighth century; but the appearance of Linus in the Iliad makes this less likely.

ANNALS OF ARCHAEOLOGY, LIVERPOOL. 1932. March.

GARSTANG, J.—*Jericho: city and necropolis*.—This article is the fullest account that has yet been issued of recent work there. Not much pottery can be assigned to the Copper Age (VIth dyn.). Seven plates of pottery types are here from one great tomb; they probably cover about a century of repeated deposits in a great family vault. They appear to belong to the close of the Copper Age (say VIth dyn.) and the beginning of Bronze which followed that.

Four plans of different levels in the deposit are given ; each divided into numbered areas, up to 49, with the place of pots and skulls marked with an excellent register, to which every pot-drawing of that tomb can be referred.

ASSOCIAZIONE INTERNAZIONALE STUDI MEDITERRANEI. Boll. 1932. May.

MALLON, A.—*Fouilles de Teleilat Ghassul*.—This article is mostly what has appeared in this Journal. The estimate of period is that the last destruction took place at the close of the Copper Age, *i.e.*, by the VIIth dynasty invaders. Some of the earlier pottery is identical with the intrusive Neolithic of the Wady Ghazze. Among the views here is one of the numerous small circles of stone, stated to be "for bread," but not mentioned in the text.

SOCIÉTÉ ÉGYPTOLOGIQUE, LENINGRAD, 7.

MATTHIEU, M.—*Notes on the Leiden Hymn to Amun*.—The syncretism of this poem is shown by uniting Amun Re and Ptah as one body. The writer was of a high priestly training, versed in the science of the time regarding medicine and public works.

PIOTROVSKY, B.—*Die Büste der Statue Senuseris III*.—This has been appropriated by cartouches of Rameses II on the arm, but is here attributed to Senuseris III, according to the form of the coiled uraeus on the head. The whole nose and mouth have been cut back, probably to get rid of breakages.

SCHOLPO, N.—*Miszellen zur Geschichte und Chronologie des Alten Reiches*.

AVHANDLINGER . . NORSKE VIDENSKAPS-AKADEMI I OSLO, 1931.

SEBELIEN, J.—*Further analyses of old bronzes*.—Beside some undated bronzes there are two from the palace of Shalmaneser II :—

		Cu	Sn	Pb	Fe	Zn	As
	Nail	86.5	12.1	.50	.54	.20	.13
	Band	90.7	8.8	.41	—	—	—
Chinese drum	.. ..	68.8	12.3	18.2	.63	—	—
Buddha head	.. ..	81.7	14.3	3.5	.30	.22	—
Buddha statue	.. ..	83.6	12.1	2.8	.30	.96	.19
Knife coins, before 200 B.C.	{	92.3	3.8	2.9	—	—	—
		60.7	8.0	30.5	.81	—	—
		38.4	3.9	56.6	1.03	—	—
Knife coin, late	.. ..	50.0	1.6	46.4	—	1.0	.97
Early Norway limits	{	85.0	5.9	.8	1.2	1.7	.30
		89.0	7.4	1.0	2.2	3.7	.38
Later Norway limits	{	81.0	3.0	.02	.15	.5	.07
		93.0	17.3	2.25	.38	2.7	.18
Siberia	.. ..	72.0	13.6	.86	13.5	.12	—
Roman As, 90 B.C.	.. ..	91.2	8.0	.58	—	.2	—
Cordutea	.. ..	91.9	7.9	—	—	.2	—
Astapa	.. ..	73.8	4.1	21.1	.5	—	.4

Rarely there are traces of Nickel, Cobalt, and Arsenic. This is, sadly, the last paper that we shall see from our old friend. See Notes.

METROPOLITAN MUSEUM, NEW YORK. Expedition, 1930-31.

This gives a summary of the works undertaken at Deir el Bahri. The discovery of the pit where Hatshepsut's statues had been smashed, has enabled the restoration of the temple plan to be completed, by the twenty-six colossal Osiride figures which stand in front of the upper colonnade, and various statues in other

parts, and the avenue of sphinxes. It is only now that we can gain a true impression of the place. The original layout of the great court before the Mentuhetep temple, and its infringement by the courts of Hatshepsut, is now made plain.

An XIth dynasty tomb of one Zar, has crudely naturalistic paintings, descending from the Khety period of art. Many interesting details of discoveries are given.

The Khargeh expedition has worked on the Roman and Christian cemeteries, but no new results have come to light.

The copying of tombs has proceeded under Mr. Davies, who gives some hunting scenes, and rows of foreigners with tribute from tombs of Autep and Amenemapt.

April, 1932.

The rearrangement of the Egyptian rooms is described, and the brilliant results of cleaning up the bronze vases, so clean that they might as well be new. The building up of the fragments of statues from Deir el Bahri has provided a noble amount of XVIII dynasty sculpture.

No. 8.

WINLOCK, H.E.—*Costume of a Sem priest*.—This was found with a papyrus of A.D. 61, and inscriptions on the costume appear to be of the same century. The robe is of linen painted with spots in rows, to represent a leopard's skin, and cut to the form of a skin. With it was a cap of linen covered with gesso modelled as a wig, with the side lock. The robe is inscribed for a priest, Har-nez.

SUPPLEM. BULL. AMERICAN INST. FOR PERSIAN ART AND ARCHAEOLOGY.

March, 1932.

This report describes the excavation of Tureng Tepe near Asterabad in northern Persia. A sample pit was sunk 35 feet in one mound and 46 feet in another, passing through many strata. About 8 feet down there were many female figures of a remarkably natural form, without the stiffness of clay work usual elsewhere. There is some finely formed pottery from graves at the lowest level. The whole is called Bronze Age, but no connection with dated material is known.

BULL. MUSEUM OF FINE ARTS, BOSTON. December, 1931.

DUNHAM, D.—*An Egyptian bronze aegis*.—This is an aegis of Mut, covered with inlays, of about the XXIIInd dynasty. It was in bad condition owing to green rust, but has been very successfully cleaned.

A notice of Dr. Reisner's *Mycerinus*, 281 pp., 78 plates, £E10, the report of work done twenty years ago, contains good photographs of three heads of the king and one of the queen.

August, 1932.

The Bed Canopy of the mother of Cheops.—This is the first detailed publication of the furniture of Queen Hetep-heres. The structure of the joints is shown in separate parts, and the fine reliefs in gold plating down the front poles is given on a large scale. The whole portable chamber was 124 by 98 inches in plan, and 80 inches high. The corner posts were 6 inches wide; on each of three sides there are three slender columns, the fourth side was open. Muslin curtains covered the whole frame. In the canopy stood the bedstead and chair. Every piece was thickly covered with gold sheathing, and the preservation of this in

the pile of fallen decay, and rebuilding of the whole on great wood cores, has been the finest piece of restoration ever accomplished.

BULL. ROYAL ONTARIO MUSEUM. March, 1932.

WASON, C. B.—*Cretan statuette in gold and ivory*.—This figure is of a youthful woman with arms squarely raised, carved in ivory. On the head is a gold cap extending over the nape of the neck, decorated with rosettes. Shoulder straps retain a tight corset, from below the bare breasts down to the hips, with a plaque hanging down front and back, all of sheet gold pattern work. All below the knees is lost. This is a new type of goddess (?), not restraining serpents as the Boston figure, nor holding the breasts as the Cambridge figure. Unlike those which are clothed with flounces, this has something less than a fitting dress. The raised arms suggest an adoring figure, yet it is too gaudy for a bull-fighter, too bare for a queen, and too sumptuous for a private mortal. Are the arms raised in blessing? This is Sir Arthur Evans's view.

When the new museum is finished, there will be seventy galleries for archaeology, each 40 feet by 30 or 60, but others larger, as the armour gallery of 120 feet by 60. The ground floor is for American art, above that, Christian, then Mediterranean, and on the top Asiatic art. Here we are held up in London for even one more gallery.

THE ORIENTAL INSTITUTE, CHICAGO.

On the opening of the new buildings of the Institute this outline of its activities is issued.

The field expeditions in Egypt and north-east Africa have carried on with Dr. Sandford the work which he began for the British School, and the geological questions of remains of prehistoric man are being solved. The funeral texts on the early coffins are being all copied for a comparative study, which has long been needed.

At Abydos the temple of Sety is being copied by Miss Broome and Miss Calverley. At Thebes the tomb paintings continue to be copied by Mrs. Davies. The complete survey and detailed copy of the Medinet Habu temple is being carried on by a large staff. Two splendid volumes are already out. The headquarters at Luxor give facilities to students in the great library of 9,000 volumes established there.

In Iraq a large block of headquarters have been built fifty miles from Baghdad, at the ancient city Ashnunnak, where a series of palaces is being uncovered. Another site ten miles away, in charge of Dr. Frankfort, proves on excavation to date from 3000 B.C.

At Khorsabad the palace of Sargon II is being excavated.

In the centre of Asia Minor a great site at Alishar is worked to explore Hittite remains, where the neolithic level has been reached at 80 feet down in the mound. This place should give an invaluable series of the civilisations of the country.

In Palestine the great site of Megiddo is being steadily cleared and planned level by level, at present in the Solomonian period. The bottom will hardly be reached in forty years, over so large an area.

In Persia the great site of Persepolis is being cleared, and the harem buildings of Darius are in so good a condition that they will be roofed over for headquarters. There ought to be a wealth of small objects in the ruins.

NOTES AND NEWS.

The interesting store of ingots of gold and silver found at Amarna deserves further consideration (*J.E.A.*, xvii, 236). If from its position it must be regarded as the produce of a theft from the Treasury, was it stolen in its present state, or is it the result of melting down by the thief?

Six bars so nearly agree together in weight that it seems each was the produce of melting up a weighed quantity of gold, probably in grains. Ten other bars also agree on different multiples of another standard—also, therefore, the produce of a weighed melt.

	479.20	÷ 60	7.987	grams
	80.25	10	8.025	
	193.70	24	8.079	
	80.98	10	8.096	
273.60	grams	162.22	20	8.111
276.51		123.35	15	8.223
280.72		246.80	30	8.227
283.70		82.95	10	8.295
286.53		99.65	12	8.305
287.95		83.96	10	8.396
				grains
mean	281.35	= 4340.	8.174	= 126.2.

The first series is obviously 25 khoirine of North Syria or Mitanni, a weight unit often found marked in Palestine. The mean is too low, but the heaviest bar is the mean value of the usual range; the others are all lighter, due to loss in melting, by dross and dirt. The second group is obviously the shekel or daric of Babylonia. The mean of all is too low for the average; but again the heaviest is the average standard, and the others have lost in the melting. The multiples in shekels and minas would read as 1 mina, 10s., $\frac{2}{3}$ mina, 10s., 20s., $\frac{1}{4}$ mina, $\frac{1}{2}$ mina, 10s., $\frac{1}{3}$ mina, 10s. Thus some are on decimal shekel, and others on mina weights.

The conclusion must be that these were accurately weighed amounts, probably from different lands where khoirine or shekel were in use; and that they lost weight in the melting. Such proves that they were careful Treasury stores, and not merely melted up by the thief who buried them. Having these definite groups on the common standards, it is reasonable to see how far other ingots conform to well-known standards.

Qedet	Necef	Beqa	Sela
90.40 ÷ 10 = 9.040	99.65 ÷ 10 = 9.965	66.55 ÷ 5 = 13.310	34.60 ÷ 2½ = 13.84
	200.74 20 10.03	265.89 20 13.295	70.35 5 14.07
	104.53 10 10.45	132.90 10 13.290	
		54.36 4 13.590	

The ranges of Necef, Beqa, and Sela, are all in the light half, as with others above.

We greatly regret to record the death of Prof. Sebelien, whose keen interest in ancient alloys so often helped Egyptology. He died on July 26th in his daughter's home at Kingston-on-Thames, while peacefully asleep, fit passing away for so sweet a character.

On the last number of this Journal, p. 36, Prof. Seligman suggests that sign 48 is "a shield in section or, possibly (though I think it is too curved), a parrying stick." Misprints occur on p. 48, l. 9—read "nomarch" for monarch; p. 49, l. 9, up—"shade," for place; p. 51, l. 8, up—"West Asian," for East; p. 52, l. 6—"Western," for Eastern.

In consequence of structural alterations, the Trustees of the British Museum have ordered that the Fourth, Fifth, and Sixth Egyptian Rooms and the Babylonian Room be closed for a period. The objects from these rooms are now for the most part packed away, and are not available for inspection until further notice. An exhibition of Egyptian papyri, paintings, cloth stuffs, and painted wooden objects is being arranged in the Third Egyptian room and will shortly be available to the public. To prevent disappointment, scholars are asked to take note of these arrangements and are warned that they should inquire whether any object or class of objects described in the guide to these galleries is available before visiting the British Museum to prosecute special studies.

Preparations are made for the continuance of excavations of the British School at Gaza. The lowest palace has to be completely uncovered, following out the great walls of the stone foundations; and a still more important group awaits us in the temples which must next be discovered. In them we hope to find sculptures and inscriptions. Everything from Gaza has a key value as being fixed in age by the close relations to Egypt. The excavations will be carried on by Sir Flinders and Lady Petrie, with Mr. G. F. Royds as before, also Mr. Harold Falconer, Mrs. Benson, Miss Ann Petrie, Mr. G. T. Maconachie, and Mr. Carl Pape. Thus in technical work this is a stronger staff than usual. Our difficulties lie in the provision for such work by the public, who regard knowledge as the first thing to be sacrificed when scaling down the claims of life.

The next number will appear early in the spring, in order to include some results of the fresh season.

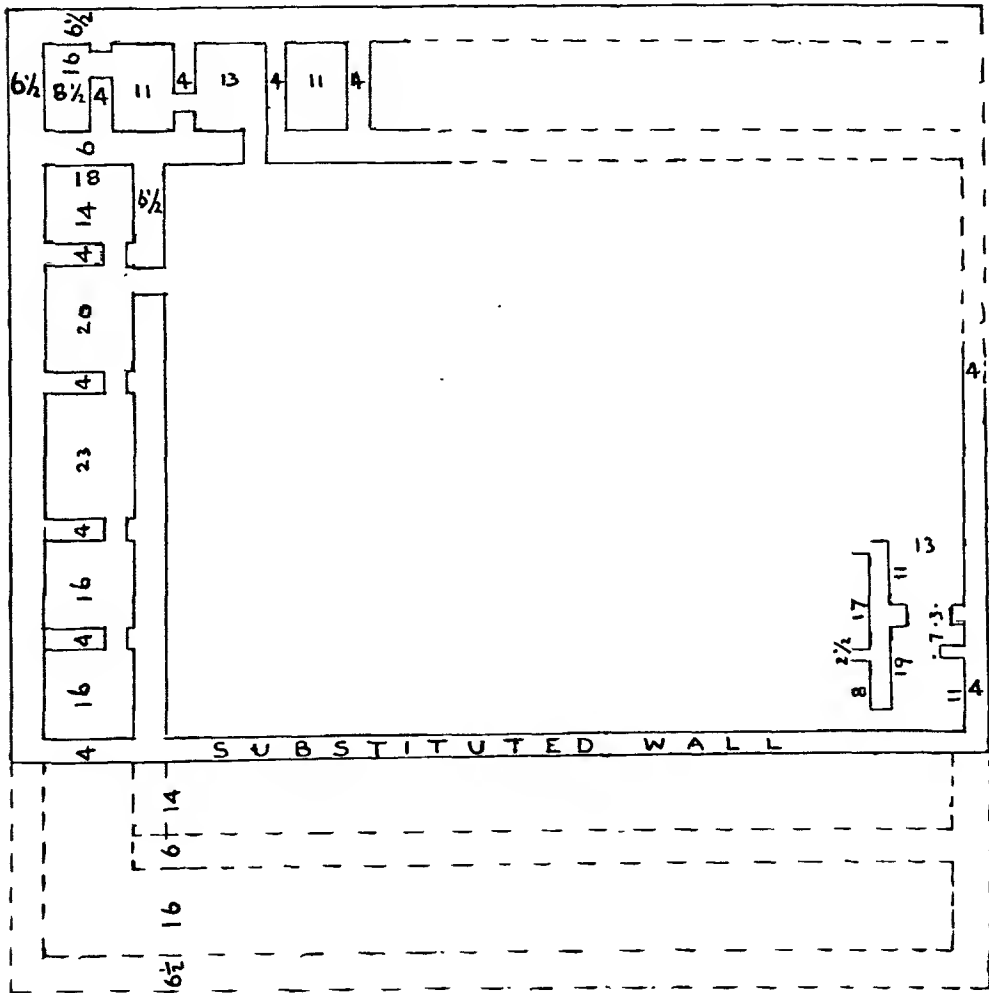
The activity and lavish expenditure of the many American enterprises in the East makes a melancholy contrast with the deadness of England. All that is done by British work in Palestine is hardly equal to the service of one of the Chicago sites. The cause of our neglect is the blindness of our millionaires. One who was interested in Palestine work left over four millions to be swept into the Exchequer, instead of founding a body of research. All honour to the Rockefeller enterprises.

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All communications addressed Lady Petrie, University College, Gower Street, W.C.1, will be immediately dealt with, and also forwarded.

ANCIENT GAZA, 1933.

THE work of last year brought to light portions of substantial stone foundations of the first palace, belonging to the VIIth dynasty. They were partly overlaid by the successive palaces of dynasties XII, XV, XVI, and XVIII. These we had to remove in part, in order to reveal the earliest palace, which was by far the largest here, and it seems also the largest known in Palestine. In course of this clearance it became evident how the Hyksos in the XVth dynasty had taken down the XIIth walls of beautifully made yellow bricks, and incorporated them with their own black bricks in the much thicker walls which they built.



The scheme of the palace was a square of 180 feet, the foot here being 11'00 inches. In the midst was a central courtyard, with chambers around it. If symmetrical there would have been forty-four chambers, the largest 18 by 23 feet, and even the bathroom $8\frac{1}{2}$ by 16 feet, the walls 6 feet thick. The north-west corner was begun in most careful manner, with large side-slabs on edge, and packing between. This style continued along the north as far as preserved ; on the west it slightly deteriorated as it went to the south, when suddenly it

was stopped, and a rough line of flat blocks laid down just to close the south side of the courtyard with a plain wall. This wall had a door in the middle, and the limestone threshold of it is polished with long wear. This substituted wall joins a 4-foot wall on the east, where chambers of brick, instead of stone, were built against it. At the corner was a second bathroom 13 by 11 feet with a drain running out to the east. The cause of this change of plan seems to have been the successful attack on Egypt, which left Gaza a mere backwater, instead of being a great bridge-head, so that no great fortress was needed here. Thus it accords with dating it to the close of the VIth dynasty, and it being due to the people who conquered Egypt and founded the VIIth dynasty.

The drainage system was traced in two stone drains which led from the back buildings to the eastern side, one from the bathroom there; these united in running out a good way to the east. Two large sump pits, stone lined, for rain water, belonged to the later buildings of the XIIth dynasty. Of the same age is a large square cess-pit beneath a chamber, with a cover of hard cement forming the chamber floor. Much broken pottery of the XIIth dynasty had been thrown into the pit. The palace region being now fully recorded it was covered over again, in order to preserve the stone, which would otherwise be cut up for building material.

On the floor of the first palace there was lying the cover or lid of a stone canopic jar. It must be much older than the XIIth dynasty, as the foundations of that age rest on two or three feet of washed silt above the level on which it lay. Such human canopic heads of stone are not known in Egypt till the XIIth dynasty, the earlier ones being of wood, so this seems unique. The work is very good, but unhappily most of the face has been broken away. There should be in the cemetery the remains of a fine tomb of the functionary for whom it was carved.

In clearing a trench across the courtyard to reach the east side, a large grave was found similar to that of no. 1417 last year (*Gaza* II, xiv, 71; phot. XLVII; plan XLVI). The body had been broken up by a later burial, but there remained the fine veined dagger (fig. 1), and the white stone pommel. This is the third such dagger found at Gaza; the veining in relief seems unknown in Europe, Egypt, or Iraq, but this type is found in the Caucasus, west of Tiflis, described as having "slightly raised symmetric ribs," figured in *Eurasia Septentrionalis* VII, 88. This connection bears out the evidence of the toggle pins, of which both the types (twisted and ringed) are found in the Caucasus, on the Caspian slopes (*Eur. Sept.*, vii, 135, 141). The age of this burial is indicated by the later burial which disturbed it. This contained a scarab of delicate work with continuous spirals arranged radially, which can hardly be later than the XIth or early XIIth dynasty; see the figure beside the pommel of (1). This scarab compels us to date the older burial, preceding it, to much before the XIIth dynasty, and therefore to the period of active occupation here of the VII-VIIIth dynasties.

Fig. 2 is a large bronze knife of the VIIth dynasty age, found in the east side of the palace. The form has been copied in the model, or toy, knife 5.

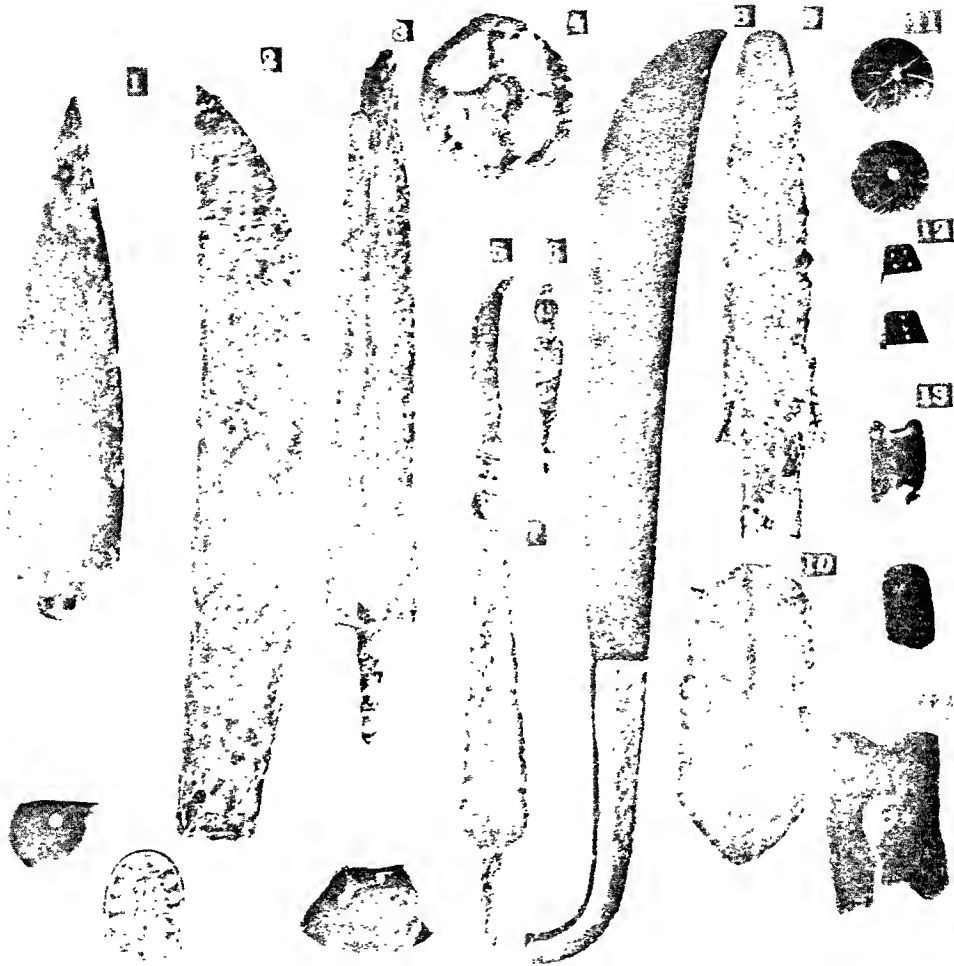
Fig. 3 is a dagger and pommel of late Hyksos age, from a burial cut into the outside of the wall of the XIIth dynasty, after that was silted up.

Fig. 4 is one of a pair of wheels, with knobs projecting on one side. They seem too heavy to have been cheek pieces of a horse bit, so they are likely to have belonged to a model chariot. Of late Hyksos age.

Fig. 6 is a model dagger of bronze, with a face punched in goldfoil at the handle, also of late Hyksos age.

Fig. 7 is one of a pair of daggers found on the floor of the first palace, and thus certainly of the VIIth dynasty.

The splendid knife of bronze (8) with a hollow handle for inlay, was found in a tomb in the cemetery with only fragments of coarse water jars, so it is not dated, but the character of it suggests the early palace period.



A curious type of knife (9) has a half tang for a handle, as in *Gaza I*, xix, 41. In *Bethpelet I*, xi, 82, it is probably middle Hyksos, but here the level is that of the XIIth dynasty.

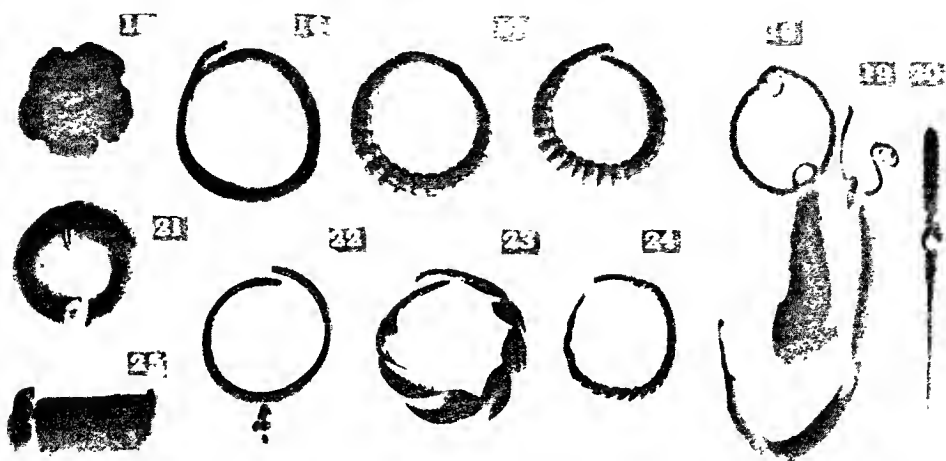
Fig. 10 is a plate of scale armour belonging to the late Hyksos or perhaps early XVIIIth dynasty. Some larger scales were also found, and all these must belong to cuisses, as they are too long to allow of a body bending.

The ivory buttons (11) and dice (12) of early Hyksos age are usual types in Palestine. 13, 14 are astragalus bones ground down to serve as gaming pieces.

Along the high western edge of the Tell we searched to the north end, but did not find any more buildings. Proceeding southward we opened up a maze of chambers, all before the Hyksos age, apparently begun in the VIIth dynasty,

and continued in the XIIth. They did not continue later, as none of the coarse Cypriote bowls were found in the chambers, only the earlier fine Anatolian bowls. Much more of the painted pottery from the north continued the interesting series of styles of which the sources are yet unknown.

The gold work is of much interest in its trade connection. Last year we found a pair of the regular torque earrings, the Irish style of which was corroborated by specialists; they were dated by the necklace found with them of the type of Tahutmes III (*Gaza* II, pl. i). This year, a smaller earring of the same style (23), was found associated with pottery of XIIth dynasty period, the later Anatolian orange line (*Gaza* II, xxxvii), the black Cypriote with red cross lines of VIIth, XIIth, and early XVth dynasty, and other pottery of the same period. The level was equal to that of the first palace, so it could hardly be later than the second palace at the furthest. The buildings about it were entirely free of the Cypriote stitch-pattern bowls which begin in the middle of



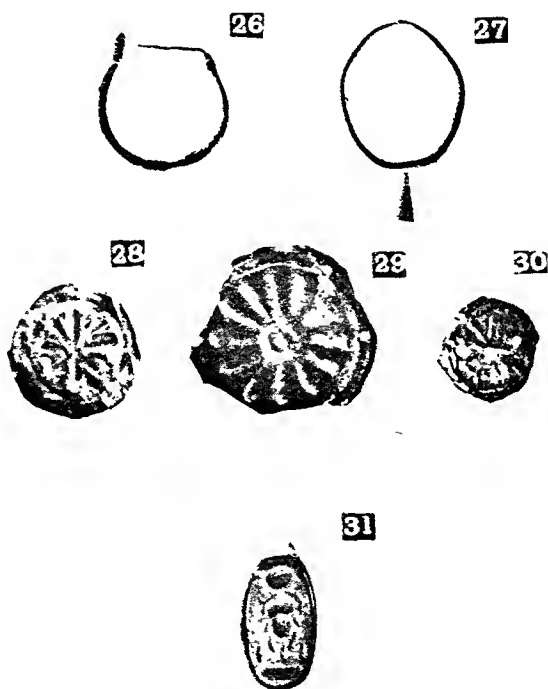
the XIIth dynasty. On every ground, therefore, we ought to date this not later than 2400 B.C. As Montelius has dated the beginning of the Copper Age to this date or rather earlier, there is no discrepancy, and the dating here reached confirms his results from Western evidence.

Ireland was the main source of western gold in early times, and having the unquestionable examples of the torque earrings it is not unreasonable to look further. The heavy plain ring (21) is of the Irish type (see ARMSTRONG, *Catalogue of Irish Gold*, Fig. 421), the Egyptian rings being thinner and with wider centres. This example is of copper plated with gold, and fifteen examples of such plating are in Dublin. Further, the twisted earring (24) is exactly like the Irish example (*Cat.* 421). With such a group of instances identical with Irish work there can be no doubt of the trade connection, though intermediaries probably passed the goldwork over the 3,600 miles of sea.

The earrings decorated with groups of globules (as 22) vary from the VIIth dynasty to the end of the Hyksos age. The ribbed earrings (17) are regular Syrian, as represented on some reliefs. The long earring (19) is of the family of the oval pendant form usual in Palestine (*Gerar* I, 3, 7, 8). The hollow silver pendant (18) is of the XVIIIth dynasty.

Other numbers are 15, a rosette, found folded up flat ; it has been soldered on. 20, a toggle pin of debased ring pattern, late Hyksos. 25, a bar of lazuli with gold caps, probably from an earring, like those in the cenotaph find (G. II, i).

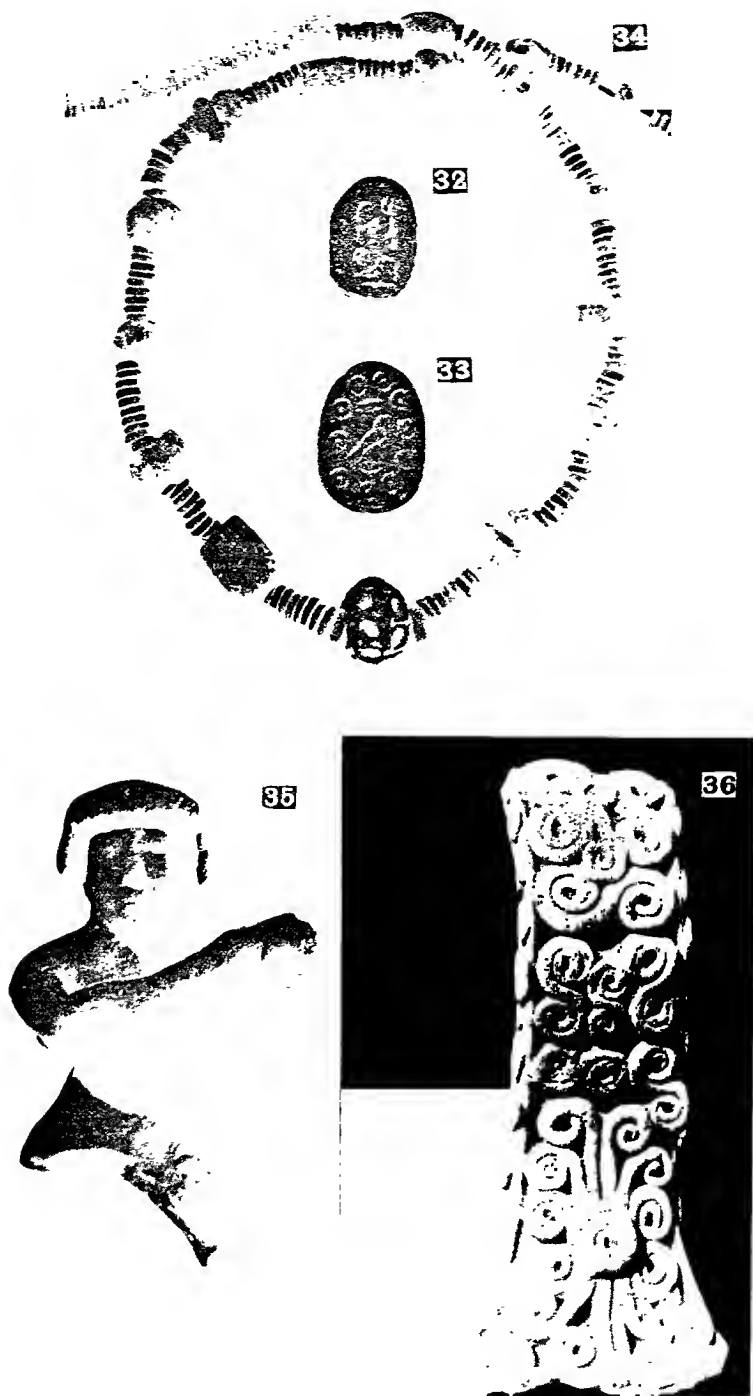
At the end of the season our work in the cemetery reached a large tomb 14 by 5 feet, with a pent-ridge roof. It seems that there had been successive burials of a family, during fifty years, by reopening a grave tomb, without a roof, and that lastly when it was filled up the pent-roof was added and a door slab placed at the end. Except for some pilfering at the reopenings, the tomb had never been robbed. The date was completely given by a large gold ring with the cartouche of Tut-onkh-amen, evidently the official ring of the governor ;



also there was a scarab of Ramessu II. The gold ring was made in Palestine, as the hieroglyphs are poor, and the weight is the Babylonian double shekel, or daric standard.

The principal objects are (26) gold ring, scarab lost, probably of glass, and decomposed ; (27) gold earring with tassel pendant. (28-30) Rosettes of sheet gold, probably for a head fillet, the large one with twelve petals and therefore Syrian. (31) Gold ring of Tut-onkh-amen, weight 264 grains, cast and chased. (32) Scarab of Ramessu II. (33) Scarab reading *Men* (?) *Hor neb*. (34) String of odd beads of carnelian and onyx with ostrich shell beads. Beside these there were two bronze daggers, with bronze knife, mirror, alabaster cup and duck dish ; also an abundance of copper hunting arrows and bird bolts, and the lead sinkers for many small fishing nets. Pottery was abundant, both Aegean of late XVIIIth and XIXth dynasties, and local imitations of the same. This is one of the best tombs known in Palestine for purpose of dating, and the whole of it was taken together for the Jerusalem Museum.

Two other unusual things are (35) a pottery figure of woman playing on a lute or guitar, the hair thick and cut short, as on the pottery figure which



probably represents a Hyksos, found last year (G. II, v). This present figure also was at the late Hyksos level. (36) is a jar handle of hard white pottery, of a kind which is quite unknown, covered with applied spirals; it seems most likely

to belong to the XVIIIth dynasty, but is of a clay and fabric which is unlike any known elsewhere.

In the history of pottery a great advance has been made by working out the levels, and therefore the dates, of over five hundred types. For the first time all regions of a great site have been treated as a unified source, by finding what the differences of level were in each region. This was ascertained by comparing the levels of two hundred types each found in two regions; the adjustment of each region to a single standard of the palace levels could then be made; after applying the corrections, the whole of the pottery can be treated on the scale of the palace levels, which are well dated. This is a main step in using the reference to Egyptian dynasties as the definition of age for types of pottery, in place of vague terms such as Middle or Late Bronze.

The early rains of the season encouraged sowing before our arrival, so the opening for excavation was restricted. Various bare spaces were searched, and the results at the south end of the Tell were so promising that it was retained for excavation next winter. In addition to the various kinds of painted pottery from sources yet unknown, this season yielded a fine Persian dagger of the Luristan type, a cylinder engraved with a rout of winged horses and other animals at the "flying gallop," and ivory inlays of probably Persian style. The quantity of foreign work from other civilisations renders this site one of the most valuable for ancient history. The amount recovered must depend on the extent of support provided by the general public, for the hundreds of labourers required. The history only awaits the supply of labour for its recovery.

FLINDERS PETRIE.

EGYPTOLOGICAL POINTS FROM THE RAS SHAMRA TEXTS.

It will not be possible to say anything conclusive concerning the new texts from Ras-Shamra until they have all been published. Meanwhile, however, the following points of Egyptological interest have occurred to the writer in studying the material printed to date.

I. THE ANOINTING OF KINGS.

It was long ago suggested by Erman¹ that the Syro-Palestinian rite of anointing new monarchs was derived from Egypt, there being ample parallels for it in that land, but none of any consequence in Assyria or Babylonia. The suggestion has more recently been revived by Bertholet,² and it is now possible that it receives a measure of support from the description of a Syrian coronation which occurs in the "Epic of Aleyan-Baal and Mot" recently found at Ras-Shamra (the ancient Ugarit).³

This description contains the following enigmatic passage :

dq anm lyrs
'm B'l ly'db mrh ;
'm Bn-Dgn ktmsm."
". (?) ; let them run,
Along with Ba'al let them make (?) ;
Yea, obeisance ⁴ along with Ben-Dagan."

The doubtful words *anm* and *mrh* are explained by Albright as borrowed from Egyptian, the former being identical with *iwn* meaning "dyestuff, pigment" (Coptic *aran*),⁵ and the latter with *mrh.t* (from root *wrh*) "unguent."⁶ Then, deriving the initial word *dq* from a root *dqq* akin to Hebrew דקק, Assyrian *daqâqu* "grind, pound," the full sense will be :

"Grind pigments ; let them run ;
Along with Ba'al let them make anointment,
Yea, obeisance along with Ben-Dagan."

If this interpretation be correct, it is certainly significant that the words used in connection with this rite of royal anointing should both be of Egyptian origin, and one can scarcely fail to be impressed with this evidence pointing to the truth of Erman's contention.

Interesting in this connection is the mention of the two gods Ba'al and Ben-Dagan as being the principal ministrants of the rite. This is strangely reminiscent of Egyptian practice wherein the two gods Thoth and Horus were regarded as the anointers of the sovereign.⁸

The writer feels bound to say, however, that he is not himself by any means convinced that the anointment of kings in Syro-Palestinian custom derived from Egypt. Nevertheless, it appears to be in the best interests of scholarship to call attention to evidence which may tend to support conclusions other than one's own.

II. THE KHEPRESH-CROWN.

The derivation of the word *khprsh* has long proved an enigma. There seems to be no satisfactory Egyptian etymon.

The present writer ventures to suggest that the origin of the word is to be sought in Anatolia, the final consonant representing indeed the common Anatol. nominative. The meaning of the word would naturally develop with the change of fashions, so that it need not necessarily mean in later Egyptian what it had meant originally in its native homeland. We may compare exactly the case of our English word "*bonnet*" which derives, through the French, from the Low Latin *bonneta* originally denoting a species of stuff.

The word *khprsh* might have meant, originally, the typical Anatolian feather-headress which Garstang has shown⁹ to have penetrated into Egypt and to be traceable in the headgear occasionally worn by the goddess Anuket. Another case of Hittite headgear penetrating into Syro-Palestine is evidenced by the presence in Hebrew of the word קִבֵּעַ, קִבֵּעַ "helmet," for, as I have shewn in JRAS, Oct., 1933, this is a loan-word from the Hittite *kupahi*.

Now, the word *khprsh* may indeed be detected in an early Anatolian text. In the Luwian-Hittite (Kanisian) bilingual VAT 13011, which has a partial duplicate in BM 108648 (=Hittite Texts in British Museum I), we read:

(Obv. II. 22-24: better preserved in HT I.I. 29-31)

"*ehu (d) AMAR. UD. qatitimatta (d) Innarawantas;*

uwat eshanuwanta kuies vestata,

LU. MES. Lulahiassan KHUPRUS kuies ishiantis

Luwian Version (only in VAT 13061, Obv. II. 22-4)

(d) Santas LUGALus (? ? palmus), (d) Annaruwienzi

askhanuwanta kuinzi vassantari

(d) Lulakhinzastar KHUPARAZA kuinzi khiskhiyanti.

"Come, O Santas, and ye Innarawantes

Who clothe yourselves in the *eskhanuwar*-garment,

Who bind on yourselves the *khuprus*."

Here it is plain that *khuprus* denotes some kind of attire, and the fact that it is combined with a verb (*iskhiya*-; cp. Greek ἑ-σχ-ον and ἑ-σχ-ινω) strictly meaning "bind" suggests (on the analogy of Hebrew קִבֵּעַ תִּבֵּשׁ, German "Kopfbinde," French "bandeau," etc.) that the word denotes a headgear, in which case we may perhaps equate *khuprus* with the Egyptian *khprsh*.

Now, in the Ras-Shamra text mentioned above, there occurs a passage in which is described the manner wherein the war-goddess Anat attacks the god of blight, Mot, and tears off his royal apparel, subsequently burning it. With the ritual background of this mythos I have dealt in Archiv Orientalní V. Part I; here it is sufficient to draw attention to the following phrases:

"akhd t plkh

plk qlt

tmt' mdh

stt khptr (?) lest,

KHBRSH lsr phmm"

(Second Tablet, col. II, 3 ff.)

which may be translated as follows :

“ She seized his disc ; ¹⁰
 The disc she burns ; ¹¹
 She tears off his robe ; ¹²
 She places the (?) ¹³ on the fire,
 the KHBRSH (crown) upon the coals.”

Here we seem to have *khh/prsh* once more as the name of a garment or article of clothing in a non-Egyptian text. Considering the fact that a large Anatolian Hurrite element is to be detected in the culture of ancient Ugarit which was, in fact, a kind of Marseilles of the ancient world, it is not unlikely that the word came originally from Anatolia and designated the feathered headdress.

III. HORUS IN A RAS-SHAMRA TEXT ?

A ritual text ¹⁴ discovered in 1929 commences with the words : “ *k t'rb 'strt hr Ibt mlk* ” which Dhorme, the first and only translator, interpreted to mean : “ When Astarte brings Horus into the palace.” This could only mean, one supposes, that the text describes the ritual for the annual coronation of the king under the form of Horus. There is, however, no evidence whatever of such a rite at Ras Shamra, and certainly none which shows that the king was regarded as a Horus. Moreover, this interpretation labours under a grave philological difficulty. The word *hr* in our text is written with the sign for “ hard h ”—the Arabic *kha*, whereas the Egyptian *Hr* “ Horus ” would, as is well known, require the alternative sign for “ soft h.” Hence, Horus must disappear ignominiously from the inscription. Dussaud has attempted, ¹⁵ it is true, another interpretation of the phrase. Reading “ *kt'rb 'strt hrs bt mlk* ” he renders “ When the Astarte figure in the palace was exchanged for gold.” This, however, is scarcely tenable in view of the fact that ‘*rb* . . . *bt*’ occurs both in Assyrian and in Minean inscriptions with the technical meaning “ introduce into the temple.” (Cp. the Minean text published by Hommel in P.S.B.A. 1894, p. 147, and the Assyrian text K. 4806, iv, 25 : *enuma alpa ana bit mummū tūseribu*, etc. Cp. also the Assyrian *erib bitī* for a special class of temple official.) I do not profess to know what the inscription really means ; it is always possible that *hr* is the Assyrian *haru* “ bowl ” ¹⁶ and that ‘*strt*’ means “ the votaress ” (Assyr. *istaritu*) rather than the goddess Astarte herself. This seems to be the more likely in view of what follows :

“ *k bgdm strmt lbs* ” which I would rather divide “ *k bgdm strm tlbs* ” identifying *strm* with the Assyrian *šutaru*, a synonymn of *lamḫuššu* meaning “ regal garment, finery.” We should then render : “ Then shall she put on garments of finery.”

It is my intention to offer a tentative interpretation of this text in another place ; here I will content myself with observing that there is no place for Horus in it, nor does it seem to refer to any sort of Egyptian ceremony.

NOTES.

1. Aegypten, vol. i, p. 317.
2. History of Hebrew Civilisation, English ed., p. 113.
3. First Tablet, column 1, 22-4.
4. ‘*db ktmsm*’ is the exact counterpart of the Assyrian expression *šukēnu kitmusu*, on which see, more fully, Ehelof in the Tallquist Festschrift.
5. The word was also adopted into Arabic in the form *أُون*.

6. The word may perhaps be recognised in Hebrew מרח (Isaiah xxxviii, 21), but this verb may alternatively be a mere bye-form of מרק "smear."
7. Other interpretations have, however, been proposed by Virolleaud, Ginsberg and Baneth. Dies diem docet; the explanation given by the present writer in JRAS 1932, p. 879, should be considerably modified.
8. Vide Wilkinson-Birch, *The Ancient Egyptians*, iii.
9. Quarterly Statement of the P.E.F., October, 1932, p. 227.
10. *plk* is the Arabic فلك; the disc is a sign of royalty, as in Assyria.
11. *qlt* is read provisionally by the present writer instead of *t'lt*, but in a primitive sense "burn."
12. *md* equates with Hebrew מדר "robe" (Virolleaud).
13. I can find no explanation of this word. An Anatolian derivation has against it the fact that -tar is usually the termination of an *abstract* noun.
14. Dhorme, *Revue Biblique*, January, 1931, No. 5.
15. Syria x [1931] p. 76.
16. The word is given in K.11409-11452 as a synonym of *kiru* which is the Urartean *kiri* and the Hebrew כִּיר.

THEODOR HERZL GASTER.

EGYPTIAN UNIVERSITY.

FACULTY OF ARTS.

THE EXCAVATIONS OF THE EGYPTIAN UNIVERSITY AT MA'ADI.

THE third season's excavations of the Egyptian University (Geography Department), in the Neolithic site at Ma'adi, conducted by Professor Oswald Menghin and Professor Mustafa Amer, began on February 1st and ended on April 4th, 1933. More than 5,000 square metres were excavated, including several trial trenches.

The season's work was again fruitful, and many interesting finds were made. Most important is the discovery of a complete square hut foundation, which gives us a valuable conception of the neolithic house construction of Egypt, and which is believed by Professor Junker to be the origin of a certain hieroglyphic sign. Fragments of sun-dried bricks were detected; and in several places were observed long rectangular earth-holes in which possibly vertical looms were erected. There was also excavated a big stove, probably a pottery kiln, in addition to several well-constructed hearths. But the greatest interest lies in the discovery of a hoard of seven basalt vessels placed in a deep cellar-hole cut in the virgin soil, possessing overhanging rims, and a rough slab of limestone as a cover. The pots are, in most cases, in an excellent state of preservation, and represent several different types, which have always been taken to represent different periods, but here are beyond all doubt contemporaneous. This is the biggest coherent find of prehistoric stone vessels made, so far, in Egypt.

In the same cellar-hole were found a fine alabaster vase and twenty-two beads, one of some whitish material, while the rest are of carnelian. Beside the above-mentioned hoard, there were unearthed during this season two complete basalt vases, as well as a most remarkable pot of grey limestone, to which some red colour was applied in such a manner that, at first glance, it looked like pottery.

Hundreds of exquisite flint implements were also collected, amongst which several big oval and exceptionally thin scrapers, and a fish-tail lance of the finest workmanship, deserve special notice. Also worth mentioning is a group of wooden objects, including a fragment of a boomerang, two small sticks, perhaps of cedar, their burnt ends betraying their possible use as incense and, finally, a carefully carved stick which may have belonged to some ornament. Beside the beads discovered in the above-mentioned cellar-hole, several body ornaments were collected from the site; they include beads of quartz, limestone, yellow rock-crystal, and azurite, as well as pierced shells, and snails belonging to different species. For the first time at Ma'adi a comb made of ox-horn was discovered. Plenty of bone implements were also found.

The booty in pottery was exceedingly rich. More than a hundred complete vases were unearthed, many of them being of quite new types. There were, for example, several representatives of a whitish ware, often provided with knobs or ear-handles, their appearance betraying their non-Egyptian character.

In many respects this pottery bears likeness to the Syrian ceramics of the third millennium B.C., thus proving once more the connections of the Ma'adi people with their Syrian and Arabian neighbours—connections which, however, date back to an earlier time—for the culture at Ma'adi has to be placed at least about 3,500 B.C., taking the date of Menes to be about 3,200 B.C.

Of particular interest is a black pot of considerable size, decorated on the shoulder with the engraving of a crocodile, and provided with a round hole, intentionally cut at the bottom; it was probably used for cult purposes. But we have not, as yet, come across a complete specimen of painted pottery, and that in spite of the fact that it is represented by so many sherds. Nevertheless there was saved this season a rather big fragment of a bowl, painted both inside and out. The pot-painting of Ma'adi has a peculiar style of its own, quite independent of the various painted wares in Egypt. Its origin and connections are as yet unknown. A piece of burnt clay representing the head of an animal was also found; though without painting, it is similar to the camel-head-like piece which was found during the first season.

The search for the tombs remained without success. There were, however, found eleven foetus interments, some in pots, and some in the virgin soil. One of the pots containing a foetus shows a most important peculiarity; it possesses two perforations representing eyeholes, no doubt, to allow the spirit buried in the pot to remain in connection with the material world. It is the first example of such a device, reappearing so frequently in later times. Human adult bones were again found this season; they were scattered over the whole area, and were mostly fragments of skulls, belonging to at least seven different individuals. It is not impossible that they came from tombs which lay within the settlement, and which were destroyed by the *sebakh* diggers. Nothing certain can be said, however, until an undisturbed grave is discovered.

The neolithic site of Ma'adi is proving more and more to be one of the most important centres of neolithic culture in Egypt. Both the scientific and material wealth it has unexpectedly revealed during this year's campaign, as well as the multitude of problems connected with the site, make it indispensable to excavate the whole of the settlement, the scientific importance of which cannot be over-rated. The excavations at Ma'adi are expected to throw fresh light not only on the complicated questions of the earliest history of Egypt, but also on that of Palestine and Syria, the most ancient chronology of which may possibly be linked in future with Egypt by the help of correlations with Ma'adi.

[The sticks with burnt ends are probably fire-drills. F.P.]

THE PENDULUM IN EGYPT.

WHEN we consider what is the natural division of time, it is obvious that the second is quite arbitrary, resulting from Babylonian division by 12 and 60. This cannot claim a scientific base, as the lunar months are not 12 but 12.4 in the year. Though the hours, derived from the monthly division, were used in Egypt, yet the Egyptians always used decimal numeration otherwise, and so it is an open question whether they used it for the day.

Another question yet unsettled is the origin of the pendulum as a time measure. The use of the pendulum for measuring the pulse may well have been an early method. It is not long ago that the pendulum length was used to define musical speed, leading to the modern metronome.

The earliest record of the pendulum being observed is Galileo's use of it to note the pulse, and his observation of a swinging lamp making uniform vibrations, whether in large or small amplitude. Yet it is difficult to suppose that in previous ages the swinging of a plumb-bob, which was a very familiar object to the Egyptians, would never excite interest or observation. The lack of a rod suspension would prevent any method of recording the swings, or of giving an impulse to continuous motion. About a century ago the pendulum was proposed as a definition of length for standard British measures, and it was only the difficulty of minute observation that gave a superiority to a metal bar as a unit.

It is therefore an interesting question what is the length of the pendulum to vibrate in the decimal division of the day, that is by 100,000 instead of 86,400, so as to reach a purely natural decimal standard of length. The length is equal to the velocity of a falling body in a given time, divided by the square of the ratio of circumference to a diameter, and the length is proportionate to the square of the time. As that velocity in one second (commonly called g =gravity) is well known at different latitudes, the result is simply derived from g at latitude of Memphis, 30° , fixing the seconds pendulum there as 39.058 inches, and this \times square of .864=29.157 inches for the pendulum swinging 100,000 times in the day.

This length is the basis of the Egyptian land measure, which we know most accurately by its being the diagonal of the square cubit. The Egyptians used a square measure and also its diagonal, so as to be able to lay out squares—as of land—one double of another in area. The cubit resulting from this

pendulum would be 20·617 inches. The most accurate definition of the cubit is by Khufu's pyramid :—

King's Chamber	..	..	..	20·632±·004
Pyramid base 440 cubits	..	..	..	20·612±·003
Average				20·622±·005

So the pendulum cubit comes well between the two best examples.

The practical steps needed to ascertain the length by observation would be to use a pendulum of $4 \times 29 \cdot 157$ (nearly 10 feet) so as to get more accurate definition, beating 50,000 in the day, or 25,000 double swings. The number could easily be recorded in Egyptian fashion, by spotting down ten swings in a line, and ten lines to a square, filled up in about three minutes ; after half an hour change guard to another observer. Do this with a day and a night guard, from sunrise to sunrise. Half a dozen such experiments, and averaging of varying results, would soon lead to a conclusion. For instance, start with one of 20 hours and another of 28 hours, the average would be right within 1 in 60. If starting again with one of 1 in 60 too long, and 1 in 60 too short, the average would be only 1 in 3,000 wrong. The limit of this accuracy in measurement of the plumb-line would be little more than a thirtieth of an inch, easily observed, between the middle of a spheric weight, and the clip which held the plumb-line at the top.

When could this have been an origin of measure ? The cubit is found as the unit in the earliest of the royal tombs, so its derivation would have been before the first dynasty. Either we have a remarkably close coincidence, or we must credit exact observation rather earlier than we already know it in the fourth dynasty.

This land measure of 29·157 was divided into 40 digits of ·7289 inches ; 25 such digits, 18·22, are equal to the Greek cubit, 18·23 inches ; and two-thirds of this, 12·14, was the Greek foot of 12·15 inches. Another line of descent was by 16 digits, 11·663, being the Roman foot, 11·65 (Dorpfeld) ; it passed again into prehistoric use as 11·68 at Stonehenge. This is the largest family of measures that is known.

FLINDERS PETRIE.



REVIEWS.

The Language of the Pentateuch in its Relation to Egyptian. By A. S. YAHUDA. Vol. I. Large 8vo, 326 pp. 1933. (Oxford University Press.) 25s.

Whenever a dogmatic system has held the ground of thought for two or three generations, there is a troubled time when its position is shown to be assailable. Fresh ideas impinging on it are resisted with contempt or abuse, and those who furnish the new stand-point will need to find the strength and defensibility of their position. This is true of the history of dogmatic belief, and equally true of the later system of dogmatic disbelief.

Dr. Yahuda wisely spends himself upon construction, establishing new positions and new views of common-sense value, and does not spend time on showing the many absurdities which have grown under the name of criticism. At the same time in his construction there are parts of very different values, the force of which will depend on the habits of thought of those who read them.

In such a wide field of details all that we can here consider is the force of the general position in each chapter, with a few notes by the way from the different basis of material civilisation. In chapters 1, 2, the current idioms of social and courtly usage are noted, as being part of the strong Egypticity of the Genesis and Exodus narratives, the close resemblance clearly showing the familiarity with Egyptian life. It may be added that thunder is called the speech of Set, in the note on the mathematical papyrus. In ch. 3, 4, the simple expressions and similes in Hebrew are likewise habitual in Egypt. We may note the use of *m · rā* (in the mouth), as the usual title for a person who gives orders: also the actual carving of a wooden finger, with a divine head, for use in ceremonies (*Anc. Eg.*, 1932, 69), and the *zeser* arm sign, as the hieroglyph for strength. The lowering of the hands and bowing is characteristic of the courtiers of Akhenaten.

Ch. 5 deals with formal phrases of comparison; these being natural ideas might recur without always necessarily a connection. The opening phrase of narration about "many days" is like the Arabic "One day from among the days" so and so happened. The lumping together in a collective term, "all the gods of Egypt," is noticeable in *paut neteru*, the lump or cake of the gods. In the phrase of the maid-servant behind the millstones the allusion is to the saddle quern where the grinder knelt behind it, and slid the top stone. In later times trachyte mills were imported from Bashan, quite flat, the upper stone having a long slit to let the corn slip down; this is the form where two women grind, pull and push (Matt. 24, 41). The circular mill is Roman, on a conical base; or, later, a pair of discs as used from Scotland to Egypt. "Seats" as a term for habitation is essentially Egyptian in the hieroglyph for every kind of residence, as we say a gentleman's seat in the country.

In ch. 6 we note the Egyptian words taken into the Hebrew of the Pentateuch, which are an important class, and decisive of familiarity with Egypt.

The second section is on the pre-Hebrew descriptions in Genesis. The Akkadian beliefs (as about the Flood) show in expressions a trace of editing in Egypt. The *tehom* "deep" is connected with the Akk. *tamtu*, "sea," and in Hebrew *tehomoth* for the lakes of Palestine; no connection is allowed with the *tiāmat* dragon. Man being made in the image of God, from the *adamah* red earth, and living by the breath of life, are all ideas from Egypt. In the Paradise beliefs, parallels to Egyptian expressions are traced. The gold land Havilah supplied "good gold," like the Egyptian *nub nefer*. Punt, the land of incense, is referred to the Arabian coast, though the name still remains attached to a typical Punite or Punic site, the peninsula of Ha-fūn on the Somali coast.

The Tree of Life, from which the gods live, is an Egyptian expression for the sycamore—mis-spelled sycamore, an entirely different tree. The "being like God" is an Egyptian wish, brotherhood with the gods, as in the funeral aspiration on the black cylinders.

In the Flood beliefs the word for ark *tēbā* is the Egyptian *tebt*, box or coffer, also applied to the ark of the infant Moses. The word for rain of the Deluge, *gešem*, is the Egyptian for rainstorm. The months and days assigned to the Flood are shown to be adopted from the periods of the Nile inundation.

The habit of punning and allusive names is of less importance, no doubt connected with the sense of the commanding value of the word or name; this is akin to the philosophic value of the word in Greek reasoning; both depending on the fallacious sense of the word perfectly expressing the true nature of an idea. We have since learned how imperfectly words ever express the far more complex intuition of the mind. On p. 266 Beersheba is a "well of seven," taken as meaning seven ells deep, but seven *tūl* or lengths of a man's reach is more likely. The expression "savour of rest" (Gen. 8, 21 marg.) means an "eternal savour," from Egyptian *neheh*, eternity, or *ne heh* "of the vast." Various analogous phrases are quoted in Hebrew and Egyptian.

The value of such detailed study of the Egyptian connections of the Pentateuch is more needed, as Semitic scholars know little of Egypt; one of the most recent histories of Palestine altogether ignores the strong Egyptian bearing of the narratives. Of the entirely fresh critical value of this work there can be no question.

The Influence of Islam. By Rev. E. J. BOLUS. 8vo. 1932. 10s. 6d. (Temple Bar Publishing Co.)

This is a well arranged study of the contact of Islam with various countries and on various subjects. It is the more welcome as such a view is difficult to grasp from very scattered authorities. It would not exactly please an Arabophil, but the faults which are noted are only too familiar to one who, like the author, has had a long practical contact with Islam. The extreme pretensions to fabulous rights and privileges unfortunately damages Islam in a work-a-day world.

The Tebtunis Papyri. By A. S. HUNT and J. G. SMYLY. Vol. 3, pt. 1. Large 8vo, 333 pp., 7 pls. 1933. (Egypt Exploration Society.)

This volume contains papers of more general interest than usual; reference here is by the number of each papyrus.

694. Treatise on Music. This is not on ordinary lines, but argues out the division of the octave, resulting in the usual major notes, but without a seventh. 3rd Cent. B.C.

698. Antiochus IV Epiphanes is known to have invaded Egypt, and to have been crowned at Memphis, but the seriousness of this display has been doubted. Now here is the opening of an ordinance of Antiochus to the Crocodilopolite nome, showing that he took up the civil government, 170 B.C. In No. 781, depredations were made on a Fayum temple by troops of Antiochus.

701. Fishermen worked for the State as owner of the fishing rights in the Fayum. They were paid partly in money, partly in fish. Loans were granted for gear. There was a "small lake," apparently in the north-east corner of the Fayum, and the village by it was in process of decay. This in 235 B.C. seems to refer to a corner which was isolated, as the main lake was reduced by blocking the supply and reducing its level; the gradual desiccation by the Ptolemies in order to obtain settlement land is thus corroborated. This small lake is not heard of after 200 B.C.

703. Rules of office for officials in various departments, for agriculture, transport, Royal revenues, deserters, correspondence, and general instructions. Supervisors of canals were to examine the size and outflow of the branches. Admirable is the precept, "In your tours of inspection, try in going from place to place to cheer everybody up and to put them in better heart; and not only should you do this by words, but also if any of them complain of the village scribes or the headmen about any matter touching agricultural work, you should make inquiry and put a stop to such doings as far as possible." Even an inspector should be human!

There was a regular sowing schedule of the nature and proportion of crops which must be maintained. The U.S.S.R. is anticipated.

817. A mortgage between two Jews for a small house was specified as being without interest for one year; but if not repaid then "overtime interest" is to be paid at 24 per cent. This clause proves that, though the mortgage was nominally free of interest, there was interest involved, probably by payment at the time of the loan, *i.e.*, supplying only 76 per cent. of the loan named. Thus the amount of interest charged was kept private, and not subject to control.

Antiques, their Restoration and Preservation. By A. LUCAS. Second edition. 8vo, 240 pp. (Arnold.) 1932.

This work has been largely revised and rewritten, to include the active experience of the last eight years, where so much conservation has been carried on. This is therefore an indispensable work of reference in museums. It is also needed in field practice, although often in the country the worker must be content with less perfect materials than are recommended here.

Sometimes different experience has led to other methods than those named here.

Salt, for instance, is removed most completely and safely from stone by percolation from the face to the back; the sculpture or painting is laid face down on clean sand, which is kept moist, water soaks through to the exposed back of the block, and then evaporating leaves salt crystallised where it is easily brushed away. As the flow is inwards at the face there is no dissolving or loss on the face.

The use of a soft butter of paraffin wax in benzine is much the best way of applying a thin coat to wood. After the benzine evaporates, the paraffin can be lightly warmed to fuse it into the fibres of the wood without being enough to choke the pores. Thus the natural appearance is preserved, and a soft brush will leave a good polish.

In washing organic matter out of grave clothes, it is good to roll the tender cloth in some firmer stuff, and then it can be soaked and squeezed some dozens of times without breaking up the fragile fibre.

For dissolving and loosening chloride of silver, citric acid is excellent; it may be used about 20 per cent. in water where much copper corrosion has to be dissolved, though only 5 per cent. is enough for cleaning sound silver. It is more readily obtained than formic acid when in the country. A rinse with sulphuric acid will remove any lime safely.

For the powdery green corrosion of copper, which is so destructive, caustic soda is insufficient, as the trouble will recur. Ammonia is the only safe cure, as its volatility makes it permeate any porosity.

Bulletin, American Institute for Persian Art and Archaeology. 5.

This recounts the wide activities of the U.S.A. in opening up Persia.

JAYNE, H. H. F.—*Damaghan*.—The prehistoric site of Tepe Hissar is the important result, giving a series of cultures reaching to 3500 B.C. This earliest age had painted pottery like the early Susa style. Over-run from the north by a people who had a free use of copper, a larger civilisation grew up which has provided a harvest of results. About 1600 burials have been opened, and a great variety of jewellery and elaborated vases recovered, about contemporary with the XIIth dynasty. The style of the vases is substantial but not clumsy, and the forms are completely different from the Egyptian. This age ended the history of the mound, between 2000 and 1500 B.C.


BREASTED, C.—*Persepolis*.—The clearing and restoration of the ruins of Persepolis is a vast task which has long been a tempting bait. The wonderful monument of a great civilisation, burnt by the drunken Macedonian, has been preserved to some extent by the mouldering of the great walls of crude brick. Only the stone portals and columns remained standing, and the sculptured platforms and wide stairways were safely buried in the soft silt washed down over them. Now there is brought to light a great array of the finest and most detailed sculpture, beginning with Cyrus, and antedating all the highest development in Greece. That site should provide a great assemblage of all the portable objects of luxury, and there should be such a revelation of the art in metal and ivory as we have not yet dreamt of; but this result needs careful nursing, and good rewards to the diggers, or it will be lost. There is not a word in the report about any portable objects being found.


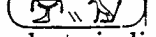
A neolithic settlement has been opened, two miles from the great palace, with flint knives and finely painted pottery. This marks a clear stage in the early history, but what went before it, and how it was linked with later grandeur, remains as the great problem before the zeal of excavators. With these world-important questions of civilisation before us, the care spent on Parthian and Sassanian and Islamic work seems misplaced energy. Persia is the key region for the early history of man.

JOURNALS.

ZEITSCHRIFT FÜR AEGYPTISCHE SPRACHE LXV, 2, 1930.

KEES, HERMANN.—*Göttinger Totenbuchstudien. Ein Mythos vom Königtum des Osiris in Herakleopolis aus dem Totenbuch Kap. 175.*—This is a new treatment of this rare chapter of the Book of the Dead, in the light of a complete version in the recently-published *Tomba intatta dell' architetto Cha* (tempo Amenhotep II-III) and of an unpublished papyrus (B.M. 10081) of the XXXth Dynasty. The text in its present form must have originated in the Heracleopolitan period, that is, in the best period of the "Coffin Texts." The explanation of the syncretic unity of Ra-Osiris in the shape of a ram (Harshefi) is given in the text in the form of a myth.

KES, HERMANN.—*Kulttopographische und mythologische Beiträge*.—This is a continuation of an article that was begun in the preceding number ; it consists of the fifth section entitled “ Hike der Aelteste des heiligen Platzes des Urbeginns.” Kes offers this translation (“ the eldest of the holy place of the beginning of time ”) of the epithet following the name of the god Hike on the sphinx stela of Thothmes IV in the necropolis area of Giza .

SETHE, KURT.—*Der Denkstein mit dem Datum des Jahres 400 der Ara von Tanis*.—Sethe suggests the following solution of the riddle presented by the Tanis stela set up by Rameses II on which is mentioned the 400th regnal year of the god whose name is placed in cartouches like a pharaoh's, "Set great in power"  and "the Ombite" :—Whilst the first six lines contain the dedication by Rameses II, the last six lines beginning with the date refer to the 400th anniversary of the founding of Tanis in the time of the god Set. The ceremony was conducted by the Vizier Seti, afterwards King Seti I, son of Pa Rameses who was afterwards King Rameses I. "The father of his fathers," whom Rameses II mentions in the dedication even before his own father Seti, must be the god Set; the whole atmosphere of the monument indicates that the Ramesside family, which sprang from the neighbourhood of Tanis and in which the name of Seti was hereditary, was actually descended from the god Set. The inscription yields the name of the mother of Seti I, who was called Ty³.

WOLF, WALTHER.—*Papyrus Bologna* 1086. *Ein Betrag zur Kulturgeschichte des Neuen Reiches*.—This is the first complete rendering of the papyrus, which is the letter of a scribe of the offering-table, Beknamun, to a priest of the temple of Thoth called Ramose. It deals with four subjects: (1) the correspondence of these two individuals; (2) the writer's search for a Syrian slave belonging to the addressee, which yields interesting details of the conditions of slavery; (3) an obscure passage about the "staff of Thoth," a cult object; (4) the writer's success in getting the grain quota for which Ramose was liable reduced by 200 sacks in consideration of the fact that the Syrian slave had not been working for him. The composition of the letter is clear and the handwriting, which resembles late XIXth dynasty hands, is good; the only difficulty is our ignorance of the actual conditions. The vizier Mery Sechmet mentioned in the papyrus has been placed by Weil (*Veziere*, p. 106) in the time of Seti II.

WOLF, WALTHER.—*Zwei Beiträge zur Geschichte der 18 Dynastie*.—I. *Thutmosis IV der Vater Amenophis' III.*—A passage in the legend of the birth of Amenhotep III at Luxor (Gayet, *Temple de Louxor, Mem. d.l. Miss.* 15, Pl. 71,

fig. 205), which, the writer states, has not been sufficiently taken into account, clearly shows that Thothmes IV was the father of Amenhotep III.

II. *Semenchkeré und Tutanchamun*.—In the light of Smenkh-ka-ra's continued residence at Amarna after Akhenaten's death and with the knowledge of Nefertiti's letter to the Hittite king, it is suggested that it was Smenkh-ka-ra who obliterated Nefertiti's name and figure on the monuments and substituted that of Merit-aten.

SPIEGELBERG, WILHELM.—*Reliefbruchstücke aus der Zeit der 30. Dynastie*.—These fragments were bought by the writer from a Cairo dealer for the Munich Museum antiker Kleinkunst (Inv. 1313). Were they not definitely dated to the XXXth dynasty by the kings' names in their inscriptions, the modelling would suggest the Ptolemaic period.

SPIEGELBERG, WILHELM.—*Beiträge zur Erklärung des Sonnenhymnus von El-Amarna*.—Some emendations are suggested in Sethe's translation of Amenhotep IV's Hymn to the Sun.

ANTHES, RUDOLF.—*Eine Polizeistreife des Mittleren Reiches in die westliche Oase*.—The M.K. stela discussed in this article was acquired by the Berlin Museum in 1928 (Inv. No. 22820). In the biographical inscription the owner K³y, an "overseer of the western oasis," relates the success of his raid into the western oasis (probably Dakleh) and the bringing back therefrom of fugitives. From this it may be inferred that this oasis was at that time a refuge for escapers from justice and that these outposts were not then under the state's control. In addition to husband and wife, five dogs are carved on the stela with their names over them in hieratic.

ENGELBACH, R.—*An alleged winged Sun-disk of the first Dynasty*.—The writer is "very certain that no sun-disk ever existed between the wings" which are surmounted by a boat and which themselves surmount the *serekh* name of the Serpent King on the ivory comb from Abydos figured in *Tombs of the Courtiers* pl. XII. (For von Bissing's statement to the contrary see *Zeitschrift* LXIV. p. 112.)

VON BISSING, FR. W.—*Ein indirekter Beweis für das Alter der "Hyksos-sphingen"*.—In the writer's opinion the sphinx of Amenemhat IV in the British Museum definitely dates the "Hyksos" sphinxes to the time of Amenemhat III or Senusert III. His dating of the Barracco sphinx to the time of Thothmes III is confirmed by the representation of an identical sphinx in the tomb of Rekhmara, with an inscription stating that the sculptures were carried out at Thebes under Rekhmara's supervision.

SPIEGELBERG, WILHELM.—*ntr.w "Götter" = "Bilder"*.—Sense can be made of a passage in the tomb of Nefermaat at Medum reading "He it was who made his gods in a painting which cannot be effaced" if the word *ntr.w* "gods" be translated by "pictures."

SPIEGELBERG, WILHELM.—*Ein Herzskarabäus*.—This heart scarab is in private possession in Munich.

SPIEGELBERG, WILHELM.—*Das Schweigen im Grabe*.—Two inscriptions in N.K. tombs enjoining silence on workers show that the quiet of the other world was to be respected even by pictures of the owner's entourage.

SPIEGELBERG, WILHELM.—*Das Thor des Beke (Bkj)*.—Bologna Papyrus 1094 mentions "the great gateway of Bky." The suggestion made here is that this

word is an abbreviation of *Bk-n-Hnsw*, the name of the High Priest of Amon in the temple of Karnak under Seti I and Rameses II.

CRUM, W. E.—*Ein neues Verbalpräfix im Koptischen*.—Thirty years ago, in describing B.M. Or. 5707, a palimpsest, the writer drew attention to a verbal prefix, *ⲙⲁⲣ-*. He now gives fourteen more examples of similar verbal combinations which confirm his assumption that we are dealing with a conditional that has been unnoticed hitherto. All these examples belong to Middle Egypt dialects. Furthermore, it may be that cases in which prefixes of a similar appearance are preceded by *ⲉϣⲱⲛⲉ* should be included; it seems certain that they must be conditional phrases in combination with this word.

JERNSTEDT, P.—*Zur lexikalischen Neuschöpfung im Koptischen*.—These contributions to Coptic lexicography deal with (1) *ⲟⲩⲉⲓⲛⲁⲣ* and (2) *ϣⲓ ⲉⲣⲁⲥ ⲉⲃⲟⲗ*, *ⲥⲣⲁⲥ ⲉⲃⲟⲗ*.

Zu den Ausführungen von Sethe über die *whm msw.t* Datierungen in den thebanischen Grabberaubungsakten der 20. Dynastie.—This article is taken from a letter to the author from Dr. Jaroslav Černý, who suggests the following explanation of the *whm msw.t* period: Rameses XI was forced in his nineteenth year to capitulate to the theocratic party and to transfer at least some power to Herihor in Thebes and to Smendes in Tanis, thereby creating a coregency, which found expression in dating after *whm msw.t*. Other parts of the kingdom perhaps continued to date from the accession of Rameses, as there is a stele from Abydos with his 27th year. *Whm msw.t* lasted at least six years and perhaps to the death of Rameses, which was not earlier than his 27th year. Apparently after his death there was harmony.

MISCELLANEA.

Under this heading Hans Jacob Polotsky shows that Sahid, *ⲕⲓⲱⲟⲩ* is the qualitative of *ⲕⲏⲛⲉ* "to be fat." Spiegelberg notes a small bronze falcon's head in the Munich Museum *antiker Kleinkunst* with a scarabaeus instead of a sun's disk, and writes on the vocalisation of *mhy.t* "North wind."

L. B. E.

ZEITSCHRIFT FÜR AEGYPTISCHE SPRACHE, LXVI, 1, 1930.

SETHE, KURT.—*Sethos I und die Erneuerung der Hundsternperiode* (mit einem Exkurs über das *whm msw.t* der thebanischen Grabberaubungsakten).—Two historical inscriptions of Seti I, which contain a most unusual phrase in the date ("beginning of eternity" *nh*), yield a new Sothic period date for the N.K. and enable the beginning of the reign of Seti I to be dated to 1318 B.C.

Another proof that the beginning of the reign of Seti I coincided with the beginning of a new Sothic period is afforded by the expression *whm msw.t* ("Renewer of birth," "reborn") which follows the mention of year 1 or year 2 in three inscriptions of this king (two at Karnak and one on an ostrakon in the Cairo Museum). A similar use of the term *whm msw.t* "Renaissance" in dates is to be found in the papyri relating to tomb robberies in the Theban necropolis at the end of the XXth dynasty. The term is here applied to an interregnum of six years between the XXth and XXIst dynasties. (On this point see Černý's article in *Zeitschrift* LXV, which should have been printed in this number.) [This agrees with the single year of reign of Ramessu I Men-peh-ra being the "Era of Menophres."—F.P.]

SCHÄFER, HEINRICH.—*Zum Wandel der Ausdruckform in der ägyptischen Kunst*.—With copious extracts from *Von ägyptischer Kunst* the writer shows

that his definitions of the main characteristics of the three great periods of Egyptian art history in this book are borne out by his later observations on the changes in the form of the lotus stem and in the manner of holding it in the representation of "smelling a lotus flower."

BORCHARDT, LUDWIG.—*Ein verzierter Stabteil aus vorgeschichtlicher Zeit.*—A portion of the ivory casing of a staff bought from a Luxor dealer is reproduced and described. It is decorated with two strips of carving in relief, each strip containing two warriors, three of whom very much resemble the figures on the Hunting Palette in the Louvre and in the British Museum.

BORCHARDT, LUDWIG.—*Zwei Kalksteinscherben mit literarischen Aufschriften.*—Of the two limestone sherds in question, one is inscribed with the beginning of the *Tale of Sinuhe*, the other with the beginning of a book of maxims hitherto unknown.

PIEPER, MAX.—*Ein Text über das ägyptische Brettspiel.*—This papyrus, which is in the Cairo Museum, was transcribed by Daressy in *Rec. de Trav.*, XVI but not translated. It consists of three pages, each containing only three lines. There are two variants; one was put together by Seyffarth at Turin, the other was found on the walls of a Theban tomb by Lepsius. The handwriting is of the time of Rameses III, though the language is classical (i.e., M.K.). In the text a game played on a board is described as if it were a journey through the other world, and this comparison is also characteristic of the XXth dynasty and quite alien to the old literature of the dead. Moreover, the Mehen snake, which occurs in the text now as the opponent and again as a protective spirit, also makes its appearance in the "Amduat" texts.

The game described in a Greek text (Grenfell and Hunt, *Oxyrrynchuspapyrus* III, p. 141 ff.) is an astronomical game. It is played on a board of 30 spaces, though the 30th, which is called the "House of Horus," may not be played on, since on the 30th day of the month the moon is not visible. 360 points may be won in the game, and this explanation renders intelligible the famous passage in Plutarch where Thoth wins 360/72 from Selene, with which he makes five whole days. It is not improbable that this game was played with the two sets of 15 pieces and the two dice that are usually found in an Egyptian play-box, for in this way a game could easily be played in which 360 points could be made. The pieces were called "dogs." In this text has survived a portion of a Greek translation of an Egyptian astronomical work, probably dating to the Ptolemaic period when such translations are said to have been officially made. The article includes a short account of Egyptian games and of publications dealing with them.

VOGEL, KURT.—*Zur Frage der Scheffelteile.*—Criticizing Neugebauer's article in *Zeitschrift LXV* (*Über den Scheffel und seine Teile*), the writer concludes that the views hitherto prevailing on the division and reckoning of the bushel may still be held. He considers that the Egyptians understood the relationship between unity and multiplicity: they could always make 320 sub-units (Ro) out of a unit and re-combine these to the bigger unit, even as by a similar process they could combine 10 or 100 hekats to form a larger super-unit.

SPIEGELBERG, WILHELM.—*Das Herz als zweites Wesen des Menschen.*—The ancient Egyptian conception of the heart as an exterior soul can be traced in Coptic, for "the heart comes back" after fright, unconsciousness or trance.

SPIEGELBERG, WILHELM.—*Die ägyptischen Namen für das rote Meer.*—The various Egyptian names for the Red Sea are given.

SPIEGELBERG, WILHELM.—*Zur Bestattung der Mumien in der römischen Kaiserzeit.*—Amongst the mummy shields of the Ann Arbor Collection at Michigan are two which contain a new formula and throw new light on the burial of mummies. The owner's name is said to be entered in the register of a certain district of the city. These texts elucidate some bilingual shields in the same collection.

SPIEGELBERG, WILHELM.—*Eine neue Bauinschrift des Parthenios.*—This stele with a building inscription set up by Parthenios in the temple of Koptos is at Moscow.

SPIEGELBERG, WILHELM.—*Die Inschriften des grossen Skarabäus in Karnak.*—From the fourth line of the inscription on its pedestal it would appear that the granite scarab excavated by Legrain in 1907 at the N.E. corner of the sacred lake at Karnak was originally intended for a building of Amenhotep III in the west of Thebes.

FRANZOW, G.—*Zu der demotischen Fabel vom Geier und der Katze.*—The first fable in the Leyden demotic papyrus published by Spiegelberg in 1917 (*Der ägyptische Mythos vom Sonnenauge*) is the story of a friendship between a vulture and a cat. It has an interesting parallel in a Babylonian fable of a friendship between an eagle and a snake, which forms the beginning of the Etana myth. This parallel, coupled with the mention of Syria and the probable mention of a Syrian in the demotic fable, suggests that the Egyptians borrowed fables from the Babylonians, the intermediaries being Syrians.

BORCHARDT, LUDWIG.—*Ein gnostisches Amulett.*—A detailed inscription, without explanation, of a remarkable gnostic amulet.




HENGSTENBERG, W.—*Die griechisch-koptischen ⲙⲟⲩⲗⲟⲛ-Ostraka.*—These Greco-Coptic ostraka, which have only been known lately, are all written by the same hand, their contents are all arranged according to a similar scheme, and all contain the formula ⲉⲧⲙⲟⲩⲗⲟⲛ, usually at the end, like a signature. In this article the writer contributes twenty-two new ostraka to the group, making thirty-nine in all, whilst a further forty-three are to be added in the next number of the *Zeitschrift*. He thinks their place of origin is between Luxor and Cairo. He translates ⲙⲟⲩⲗⲟⲛ as "mill." The inscriptions usually consist of (1) date, (2) source of the grain, (3) nature of transport, packing and quantity of wheat, (4) destination, namely "the mill." These ostraka conjure up a big estate possessing its own mill. They were delivery notes sent by the various tenants to the miller, and though nearly all are written in the same hand, they were written at different places, probably by an official who visited the several threshing-floors to supervise the transport of the grain to the mill.




MISCELLANEA.

BISSING, FR. W.V.—*Noch einmal die älteste geflügelte Sonnenscheibe.*—In spite of expert disagreement, the writer cannot abandon the view he expressed in *Zeitschrift* LXIV regarding the presence of a sun-disk on the ivory comb from Abydos.

SCHÄFER, HEINRICH.—*Die Seele auf der Pyramidenspitze.*—A prayer on a XIXth dynasty monument in the Vatican Museum (No. 214) reads, "May he

(Osiris) let her soul (*bai*) come forth and alight on her pyramid and see the sun at his rising." This prayer elucidates the inscriptions at the apex of the pyramid of Amenemhat III, which state that the king sees the beauty of the sun (east side), that his soul (*bai*) is higher than Orion, etc.

GARDINER, ALAN H.—   = "umbilical cord" *Westcar* 10, 11-2 should be translated, "They washed him *after* his navel-string has been cut," and this passage should be expunged from § 487 in Gardiner's *Grammar*.

SETHE.—*Ein neuer Ausdruck für "von . . . bis."*—A passage in the beginning of the letter in the *Tale of Sinuhe* in which the king tells him to return (B. 181/2) should be translated, "Thou hast traversed the lands from *Kdm* to *Rtnw*."   is a compound preposition followed by , both together meaning "from . . . to."

In a supplement to this number Ludwig Borchardt deals with some Egyptian "antiquities" that he considers modern fakes (*Ägyptische "Altertümer," die ich für neuzeitlich halte*).

L. B. E.

Zeitschrift für Ägyptische Sprache LXVI, Part 2, 1931.

This number of the *Zeitschrift* opens with obituary notices of Eduard Meyer, Wilhelm Spiegelberg, and Luise Klebs.

REISNER, G. A.—*Inscribed Monuments from Gebel Barkal*.—Full texts of the inscriptions found by the expedition are issued. As an introduction, a full list of the buildings excavated is given, arranged as far as possible in chronological order. Seventy-two monuments are listed, but these form but a part of the statues, stelae, etc., indicated by the broken fragments found in the débris all over the site. These monuments fall into four classes according to the conditions in which they were found:—(a) Monuments in or near their original position, as placed by the kings whose names they bear; (b) Monuments brought from other temples and found in or near the place where the king who had transported them had set them; some of these were found intact; (c) Monuments found outside the temple in which they had stood in deposits made during a renovation of the temple; these comprise the ten royal Ethiopian statues and the N.K. statuette; (d) Fragments of monuments found scattered in the débris. Assuming that the temple services were abandoned about A.D. 500–600, a large part of the destruction has taken place since that time. Each of the temples was of the N.K., built and endowed by the conquering king of Egypt. The most considerable of these was B. 500 first (B. 503–519), which afterwards became the great temple of Amen.

The restoration and new work done by Piankhy and his successors is reviewed, and the variations in Piankhy's titulary discussed. (Piankhy used his personal name for both cartouche names.) The writer concludes that the red sandstone stela No. 26, found in B. 501, with the figure of the king and his name erased and the figure and name of Piankhy inserted, was made by Piankhy in the first part of his reign, before his journey to Egypt. It was probably set up in B. 501 by Piankhy himself, and was mutilated by his successor and brother-in-law, Shabaka, whilst Piankhy's figure and name were restored by Tirhaqa. The stela remained in B. 501 through all the vicissitudes of the kingdom of Ethiopia and the kingdom of Meroë. At some period the stela was broken near the base and the large upper part was set in socket No. 1 in the same room. There it stood during the last Meroitic occupation of the temple. The temple was abandoned

and the court began to fill with sand. In levelling the ground for building their huts, the local inhabitants, then Christian, overturned the stela on its face and built over it, and there it remained until it was excavated in 1920.

SCHARFF, ALEXANDER.—*Zur Erklärung und Datierung des "verzierten Stabteils aus vorgeschichtlicher Zeit."*—In Part I of this number of the *Zeitschrift*, Borchardt published an ivory carved with reliefs, which he considered had formed part of a sceptre. Scharff considers that it was an amulet, like the ivories from Hierakonpolis, and dates it as late prehistoric, about S.D. 70.

GLANVILLE, S. R. K.—*Records of a Royal Dockyard of the Time of Tuthmosis III: Papyrus British Museum 10056.*—This article consists of introduction, translation and plates; commentary, conclusion and appendix are to follow. The papyrus is inscribed on both sides with a register from a dockyard, recording the supplies of wood given to a number of chief craftsmen over a period of, roughly, eight months. There can be little doubt that this papyrus came from the same chancellery as another large document of the period containing accounts, namely, the so-called Verso of Papyrus Leningrad 1116 A. and B. The London papyrus appears to be a record from a dockyard connected with Memphis. This place was under the direct control of the Prince Amenhotep who afterwards became Amenhotep II. It can have been nothing less than the chief port of the kingdom—a fact that receives added importance when it is remembered that at the period with which these records are concerned, Thothmes III was laying the foundations of the first Egyptian navy. The origin of this royal dockyard was probably due to the impulse given by Thothmes to sea transport for his military campaign.

HENGSTENBERG, W.—Nachtrag zu "*Die griechisch-koptischen μουλων Ostraka.*"—The forty-three additional ostraka dealt with in this supplementary article consist, with one exception, of material in the Coptic Museum at Cairo and in the Munich Seminary of Egyptology. They are now known to come from the neighbourhood of a big Coptic settlement in the extreme west of the Fayum. From the Munich ostraka we learn that some of the grain was sent to the μα-πορζε, presumably a sorting-place for seed-corn, connected with which was a granary, and that only the quantities following the word *cene* went straight to the mill. In the case of ostraka bearing this word, the division of the grain was presumably decided by the official at the threshing, whilst in those on which it is missing, the decision was presumably left to the official at the sorting-place. But all the grain went "to the mill," for τμουλων had either become a place-name or was a general term for the area in which granary, sorting-place and mill were situated.

MISCELLANY.

SCHÄFER, H.—*Isis Regengöttin?*—An entry in a page that presumably belongs to the Rhind Mathematical Papyrus indicates that Isis was a Rain Goddess.

L. B. E.

BULLETIN INST. FRANÇAISE ARCHÉOL. ORIENT. XXXII.

ENGELBACH, R.—*Transcription of European words into Arabic.*—This is especially for proper names. It is proposed to enrich Arabic with five more vowel forms—eight in all—to supply long and short values, by reversed vowel points; also to supply a short and long *o*, and to borrow Persian variants for *tch*, *zh*, *p*, hard *g*, and *v*. Rather than complicate an already awkward alphabet

(needing dot additions for half the letters), would it not be more practical to use the European alphabet for all European names? Patching a bad case is a burden on the future.

WEILL, R.—*Compléments pour "la fin du Moyen Empire."*—In these additional notes the new point of the Hyksos XVth dynasty having ended the XIIth dynasty, and being contemporary with XIIIth, is fairly welcomed as starting a new arrangement. The following new material is discussed:—

1. The great gate at Medamud of Senusert III was a model for another gate by Sekhem-re-khu-taui Amenemhat-Sebekhetep (xiii, 15); other works of his are a lintel of Medamud, and at Gebeleyn and Kerma.

2. User-ka-ra Khenzer. The scarabs of Frazer, Cairo, and Cleveland are now supplemented by the block granite apex of the pyramid at Saqqara, and the revision of the Turin papyrus brings Khenzer in as xiii, 17. This has nothing to do with the Khenzer of the Louvre stele, Ra-ne-maot-en-kho.

3. Coffins and Canopics of the family Antef-Sebekemsaf-Thouti, from Winlock's paper of 1915.

4. Queen Sebekemsaf; this queen, named on an Edfu stele, is probably the wife of Antef, Ra-kheperu-nub.

5. New contemporaries of Queen Nub-khos. This gives no historical detail.

6. Name of Ra-sekhem-shed-taui (xiii R). The *s* prefixed to *shed* in some transcriptions of pap. Abbott, is now read as a seated figure. It also occurs in a judicial papyrus at Vienna.

7. Ra-sekhem-uaz-khou (xiii Q) repeatedly appears at Medamud down to 1930.

8. Ra-sekhem-se-uaz-taui Sebekhetep III (xiii, 20). Many pieces at Medamud.

9. A Senusert after Sebekemsaf. A graffiti on Ra-sekhem-uaz-khou.

10. Neferhetep (xiii, 21) at Byblos, on a relief of Prince Onten, son of Ryn, and therefore in possession of the Delta.

11. Ra-kho-nefer Sebekhetep (IV) (xiii, 23) besides published pieces there is a stele from under a column of Karnak.

12. King Dudumes, Edfu stele, already published.

13. Ra-seuaz-en and Ra-mer-hetep Ay; no new facts, but suggestions contrary to the Turin Papyrus.

14. Ra-se-onkh-en, Mentu-hetep on a sphinx at Edfu (xiii W).

15. Supposed Ra-neb-nefer is really Ra-neb-kheru, XIth dyn.

16. Hyksos scarabs in Palestine, Weill accepts the Bethpelet discoveries.

17. Family of Ta-aa-Kames-Ahmes. The princess Kames in the tomb of Khabekht is a mistake for Khebt-neferu, daughter of Tehutmes I.

WEILL, R.—*Formule énigmatique dans un texte religieuse.*—This is finally rendered "Quelle merveille!—être d'existence, certes!—être d'existence [oh] combien."

ALLIOT, M.—*Un puits funéraire à Qournet-Mora'i.*—The only matter of interest is a statuette with adoration of Ra by a royal son of Kush, scribe over troops of Amen, fanbearer, Amenhetep.

A pyramidion found apart with adorations of Ra and Osiris by Henket-onkh; and of Horakhti, Ra and Osiris by Amenemhat.

LEJBOVITCH, M. J.—*Formation probable de quelques signes alphabétiques.*—This recites the various opinions on the Sinaitic signs; discusses the meaning

of the alphabetic signs, and supplies tables comparing Sinaitic, Phoenician, Byblos, Egyptian, and Ras Shamra writing. No fresh material is quoted.

GRAINDOR, P.—*Inscriptions de la Nécropole de Touna*.—Four ink-written graffiti on tombs, entirely Greek in expression.

CRESWELL, K. A. C.—*La mosquée de 'Amru*.—Translation of the account in *Early Muslim architecture*. The original mosque founded in 641 A.D. was only 30 × 50 cubits: there were six gates, and the whole was covered in. The ground was covered with pebbles, without matting. Probably palm stems served to support the roof beams. The walls were of brick, plastered, and there was no minaret. Plans of the successive additions to the site in the first two centuries are given. Pocock's plan of 1737 shows that about half the columns were lost in the ruin after Napoleon's invasion. A large recent plan gives the dating of the present walls between 827 and 1798 A.D. The drawings of the ancient parts of the walls show the varieties of structure, further illustrated by twelve plates of photographs.

CHAMPOLLION, J.-F.—*Catalogue du cabinet des antiques de la ville de Grenoble*.—This is of personal interest, and shows the state of archaeology in 1812.

QUARTERLY OF THE DEPT. OF ANTIQUITIES, PALESTINE. II. I.

LAMBERT, C.—*Egypto-Arabian and Phoenician coins*.—Small silver coins which formed probably a hoard. These are pure Phoenician, copies of Athenian, and other borrowed types, apparently all of Phoenician fabric.

ILIFFE, J. H.—*Third-century portrait busts*.—One which is probably from Askalon is attributed to Salonina, and seems hardly earlier, or Otacilia might be intended.

ILIFFE, J. H.—*Pre-hellenistic Greek pottery in Palestine*.—The best of this is already known to our readers from *Gerar*.

MAYER, L. A.—*Two inscriptions of Baybars*.—The larger tablet is in memory of his visit to Neby Musa in 1269 A.D. The other is from Damra near Gaza referring to a visit there.

HAMILTON, R. W.—*Street levels in the Tyropoeon valley*.—This refers to masonry and street paving entirely of the Roman period.

II, 2, 3. JOHNS, C. N.—*Excavations at Athlit, 1930-1*.—This site has happily provided earlier material than mediaeval, ranging from dyn. XXIIIth to Roman. The Egyptian designs on scarabs are all of Syrian work, like the exports to Sardinia. The jars are the usual XXIIIrd style, types 47 G, H. Just after these come two bronze knee fibulae, and next a scarab of Psemthek. Blue eye beads are also usual. There is a Cumaean glass vase, and various sherds of Vth cent. painted Greek pottery, but no new types of objects.

BARAMKI, D. C.—*A Byzantine bath at Qulandia*.—Five chambers belong to a first period, with two small ones added later. Two chambers had mosaic floors of plain tesserae.

ILIFFE, J. H.—*A copy of the crouching Aphrodite*.—This is a good copy of the type of Doedalsas, 250 B.C., which was favoured in Syria. It comes from the cloister of statuary at Askalon.

LAMBERT, C.—*Hoard of coins of the Constantinian Period*.—These are all of copper, from the eastern mints; out of 448, there are only 21 of Rome, and but 2 of the familiar Trèves.

ILIFFE, J. H.—*Greek and Latin inscriptions in the Museum*.—The important piece is a milestone of Hadrian, from the Xth mile on the Acre to Tiberias road : re-used under Constantine. A tablet and tiles of the VIth and Xth legion add to the army records.

MAYER, L. A.—*Satura Epigraphica Arabica II. Safad*.—A large cave with loculi is known as the "cave of the daughters of Yakub" from the nuns of the convent of St. James. It continued to be venerated as late as the Arabic renovation in 1412 A.D.

STEPHAN, S. H.—*Two Turkish inscriptions from the citadel, Jerusalem*.—One of the 18th century, the other of the 19th.

AVI-YONAH, M.—*Mosaic pavements in Palestine*.—Four pages of useful types of patterns are given, with reference numbers. Over a hundred are listed, and the list will be continued, forming an outline of a much-needed corpus.

II, 4. AVI-YONAH, M.—*Mosaic Pavements in Palestine*.—This catalogue is continued from 104 to 181, mostly in Jerusalem, where such works abound owing to the number of churches. When the statistics of the whole list can be compiled we may glean conclusions.

ILIFFE, J. H.—*Vaulted tomb at Askalon, III-IV century A.D.*—A small bronze cross of square type points to the later limit, or beyond that.

Excavations in Palestine 1931-2.—This record of work, not reported elsewhere, is helpful. Mr. Manville has opened two rock shelters of prehistoric age. Miss Garrod's party cleared a mousterian cave with several skeletons. Prof. Albright worked in Middle Bronze age at Beit Mirsim. Prof. Badè at Tell en Nasba found a fine agate seal of Jaazaniah, of 2 Kings, xxv, 23. Other results are of Roman age.

III, 1. HAMILTON, R. W.—*Excavations in Atrium of Church, Bethlehem*.—A pavement of Constantine and some foundations of Justinian were unearthed, beside complications of mediæval additions.

ILIFFE, J. H.—*Rock-cut Tomb at Tarshē hā (near Acre)*.—The latest coin was of Arcadius. The stamped glass pendants, with a lion or seven-branched candlestick, are later in style, but continue the tradition of those of 249 A.D. with heads of Philip and Otacilia. The bronze cross has expanded ends, and a circle on each.

BARAMKI, D. H.—*Early Church at Khirbet 'Asida (north of Hebron)*.—The animal figures in the mosaic pavement (about 465 A.D.) have been altered into plants, probably by the iconoclasts.

MAYER, L. A.—*Lead coins of Barquq*.

MAYER, L. A.—*Inscriptions at Isdud, A.H. 667 and 877*.

AVI-YONAH, M.—*Mosaic Pavements, Nos. 182-333*.

BULL. SOC. ROYALE DE GÉOGRAPHIE D'EGYPTE, XVI, XVII.

DARESSY, G.—*Les branches du Nil sous le XVIIIe dynastie*.—This is a detailed study of the ancient condition of the present water-logged salt marshes of the north-east Delta. The district was anciently most fertile, and it was only the sinking of the Delta in Roman times which submerged the coast and formed Lake Menzaleh. On a final map there are traced nine former shore lines of the successive stages of Delta deposits ; the details of contour of former coast lines

are given on a large map, from Mendes to Qatieh. The study opens with a collection of the lists, both Greek and hieroglyphic, of the mouths and branches of the Nile. The Defenneh region is considered at length, regarding it is a Ramesside centre on the strength of the account by Herodotus. Zaru-Sele is placed at Qantara. The latter half of the paper is devoted to the region of Lake Menzaleh. The traces of former coast lines are detailed, as seen in raised sandy ridges which were dunes. The ancient branches of the Nile are detailed in their course through this region. The former theories about the sinking of the land are described. The earliest change of level is quoted from Strabo; but the detail in Dion Cassius, that the sea broke in at Mount Casios, is not named. The various later references have often been stated in *Ancient Egypt* (see indices).

EGYPTIAN RELIGION, No. 1, April, 1933. Quarterly 5\$ (New York.)

This journal, edited by Dr. Mercer, is the successor to his Journal of the Society of Oriental Research. Unfortunately two-thirds of the first number is occupied by a close description of the cosmogony of Hermopolis by Dr. Roeder, in German. *Mlle. Warboruck* gives a short notice of Bes figures, in connection with a youthful Bes performer in a harvest festival. Undoubtedly that god was alien to Egypt, and not recognised in temple service, but was not necessarily only regarded by the poor. The fine ivory figure of Bes type of Hyksos age from Sedment shows the attention of the wealthy. Bes belongs to the cycle of animal gods on the ivory wands. As suggested here, he was a god of music, and a guard against evil spirits, like David who exorcised Saul. In this aspect his protection was sought at birth. The female Bes figures of Roman age should also be considered.

Battiscombe Gunn rejects the proposal that Ra is intended by this word *R'ah* in Ex. x, 10, translated *evil*: partly because that is a disyllable, and partly because in late usage Ra usually has the article *P* prefixed. *Dr. Mercer* discusses Behdet, concluding that it was the name of Damanhur, later transferred to Edfu.

MEM., L'INSTITUT D'EGYPTE, XVIII.

Lacustrine Mollusca from the Faiyum depression. By ELINOR W. GARDNER, 1932, 4to, 139 pp., 8 pls.—This is not only a study of the pleistocene and recent species locally, but also in relation to the movements of species between Egypt and Palestine. The plates, with over four hundred figures in helio-gravure, will be a most useful type-list for identifications. The most interesting general conclusions are that in the pleistocene there was a northerly movement of southern forms even reaching Palestine; also a shift of Palestine forms down to the Fayum. But in late neolithic times the Ethiopian forms died out both in Palestine and the Fayum.

NOTES AND NEWS

The long delay in issuing this part is due to the absence of the Editor in Palestine. As in future he will not be in England except in the middle of summer, it is not practicable for him to be responsible for future numbers.

In this position he is happy to say that Dr. M. A. Murray and Mrs. Mackay offer to continue the management as Joint Editors with him.

Prof. Petrie has resigned the Edwards chair of Egyptology in London University. He will be in Palestine from September to May. He hopes each summer to attend to the labelling and arrangement of the collection, in conjunction with his successor, Mr. S. R. K. Glanville, who will leave the British Museum to become Reader in Egyptology. Dr. Murray will for the present continue her position at University College.

The excavations of the British School of Egyptian Archaeology will be continued by Prof. Petrie and staff at Gaza during the winter. In the intervals between that, and work at University College in summer, his address will be Beaumont House, Jerusalem.

The most unusual discovery of last winter was in the Nubian Archaeological Survey. A king of about the IVth century A.D. was found in his tomb, wearing a large silver crown studded with jewels, holding an iron sword with silver hilt, and with heavy silver bangles, anklets, and toe-rings. A Greek inscription on a gold plate shows a mixture of pagan and Christian cults. Slaves were slaughtered at the burial.

In Cyprus the museum work has disclosed a neolithic settlement, with astonishing pottery, hand-made, covered with white slip bearing patterns in lustrous red or orange. The patterns will show whether this is the class of white and chocolate foreign pottery found at Gaza. The Neolithic houses are preserved in strata, thirteen feet deep. We hope that Mr. P. Dikaïos will soon publish his important discoveries.

The diorite quarry has at last been found, far north-west of Abu Simbel, in the desert. Steles of the XIIth dynasty show one period of working. Amethyst also occurs there, so that is probably the source of the fine supply during the XIIth dynasty.

At Lisht a fine tomb of Sen-usert-onkh has been found, with long texts of the pyramid style, almost perfect. The burial chamber is, however, under water.

The Editor is informed that Mr. Hoover's direction of the company working for Sinai turquoise was subsequent to the destruction of monuments by those miners.

The prospects of work for the British School at Gaza are encouraging for next winter. Having finished the five palaces, 3100-1500 B.C., and early buildings adjacent, on the Tell, and dug about an acre of city streets and houses of 2300 B.C., we shall now proceed to work on the intermediate acres where more of the city will be found to lie, and probably the temples. Also on the plain below there are deposits of varying ages, and possibly the governors' tombs. Groups of objects bearing on *Josh.* vii were twice found in this region.

As usual, more than enough students with excellent qualifications have offered for the expedition, and several have been regretfully declined. There await us the 400 Bedawy workers of other years. Only funds are lacking !

A large number of donors have omitted to forward any contribution for the coming season of discoveries. We shall be much hampered unless arrears, and fresh donations, are sent in during the autumn.

Those who cannot give might adopt the following method of raising support for the digging. Miss Wellesley Reade and Mr. J. Sassoon got together recently a loan exhibit in a little drawing-room, where they held a sale of small antiquities and of our British School gilt embossed blotters, bookmarkers, and illustrated booklets. They realised a sum of more than £5 for the digging, and they, and we, hope that others will do the same.

Anyone who would be good enough to help in this way can send an application addressed Lady Petrie, University College, Gower Street, W.C.1, proposing to fetch small antiquities for exhibition or sale, and the accompanying books and photographs for sale.

These latter can also be had at any time for use as Christmas gifts

	s.	d.
"Vision of the Ages," by Flinders Petrie, 25 pp., 11 pl. of jewellery, frescoes, fortresses, only portrait of Cheops. Cover green, with blue lotus	2	0
Blotter or portfolio in white vellum paper, with embossed and gilt jewellery of Shepherd Kings	2	0
Bookmarker, embossed with same	0	6
Portrait photo, Flinders Petrie at excavation	0	6
Twelve stereoscopic photos of digging Bible city	3	0
Two additional packets of twelve, 6s., or 3s. each	6	0
<i>Postage according to weight of parcel ordered.</i>		





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